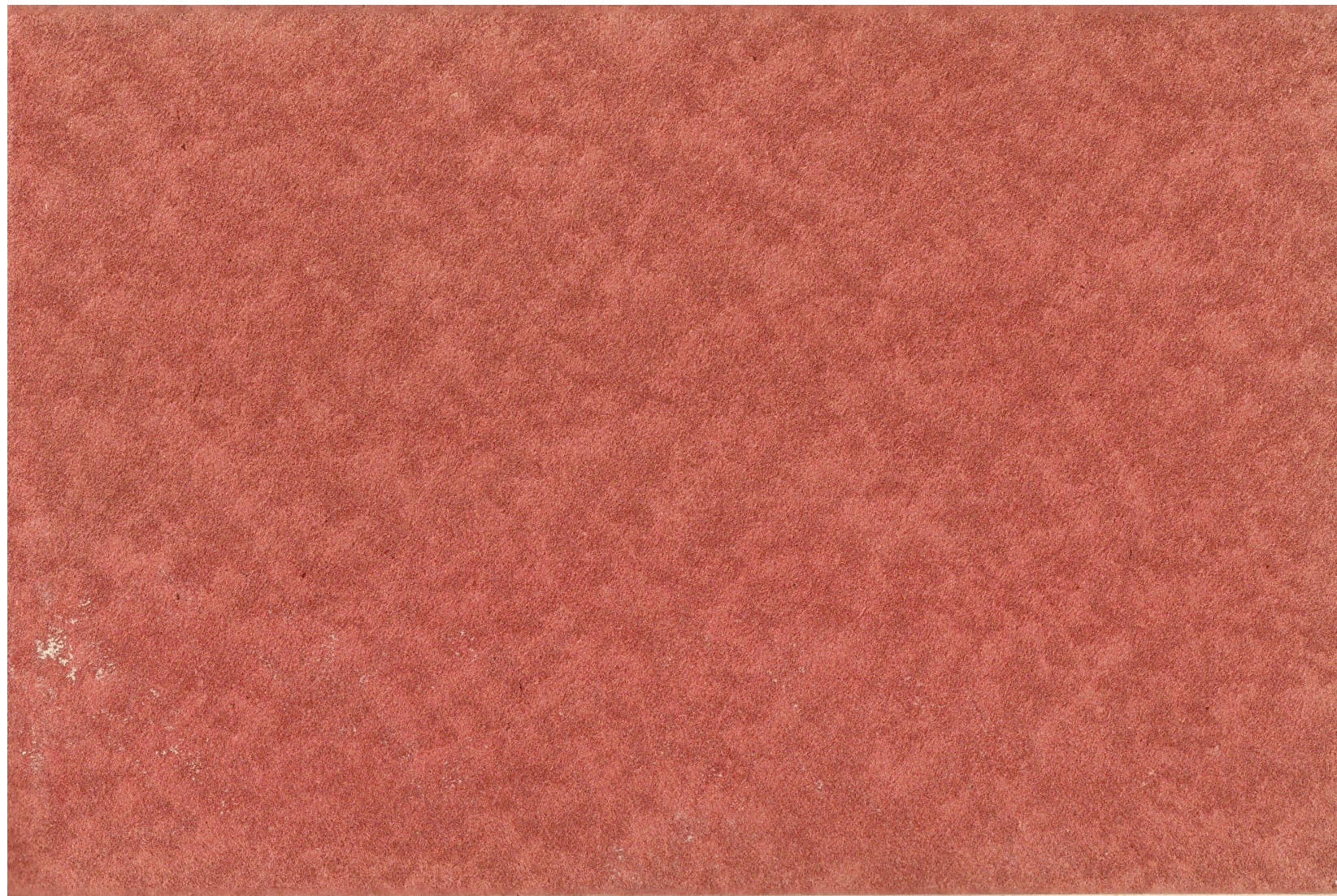


AMERICAN
LOCOMOTIVE
COMPANY

NEW YORK CITY

CATALOG Nº 10051

LIGHT
LOCOMOTIVES







LIGHT LOCOMOTIVES

FOR

DOMESTIC SERVICE

BUILT BY
AMERICAN LOCOMOTIVE COMPANY

CATALOG NO. 10051

THE CODE WORD FOR THIS CATALOG IS

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AMERICAN LOCOMOTIVE COMPANY

30 CHURCH ST., NEW YORK CITY, U. S. A.

CODE ADDRESS: "LOCOMOTIVE NEW YORK"

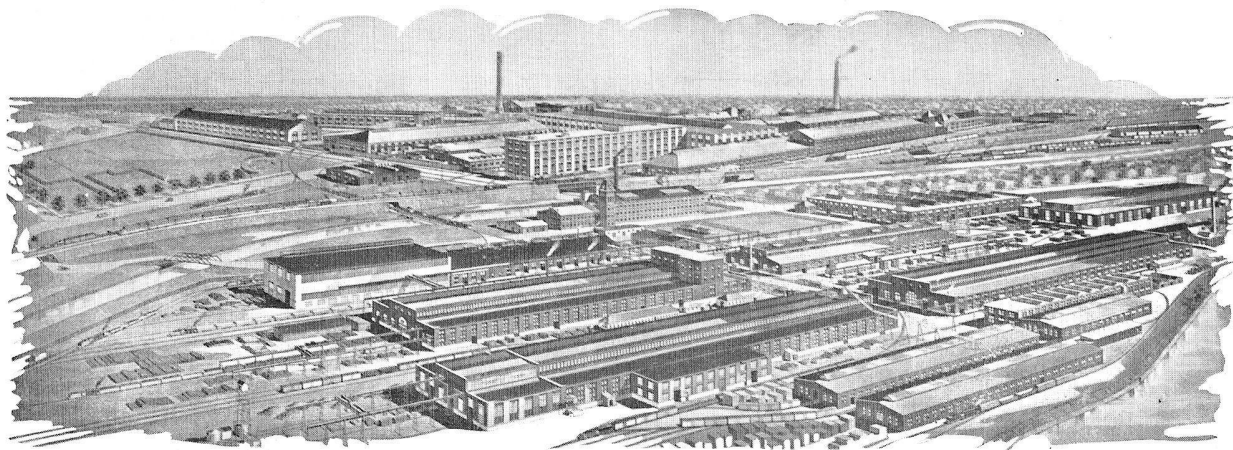
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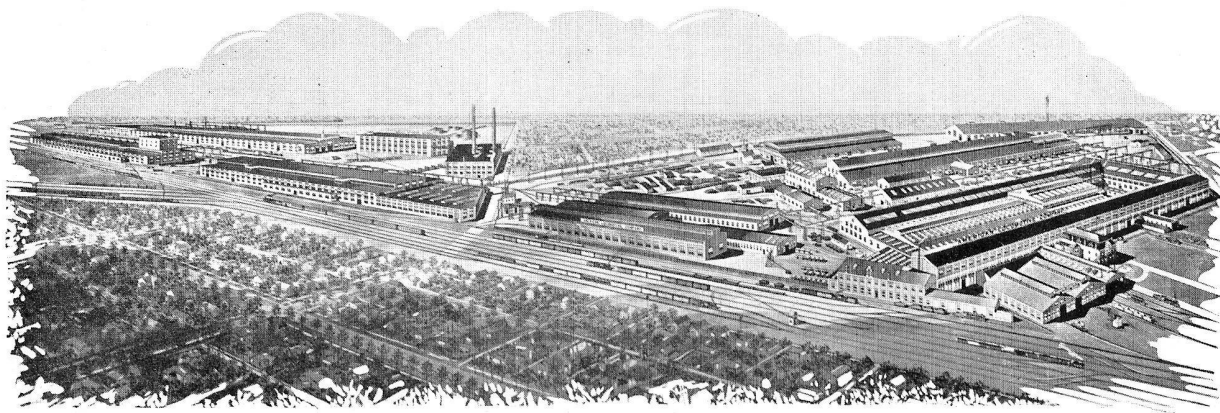
SCHENECTADY WORKS	Schenectady, N. Y.
BROOKS WORKS	Dunkirk, N. Y.
MONTREAL WORKS	Montreal, Can.
RICHMOND WORKS	Richmond, Va.
COOKE WORKS	Paterson, N. J.
CHESTER (STEEL FOUNDRY)	Chester, Pa.
ALCO (ACCESSORIES PLANT)	Richmond, Va.

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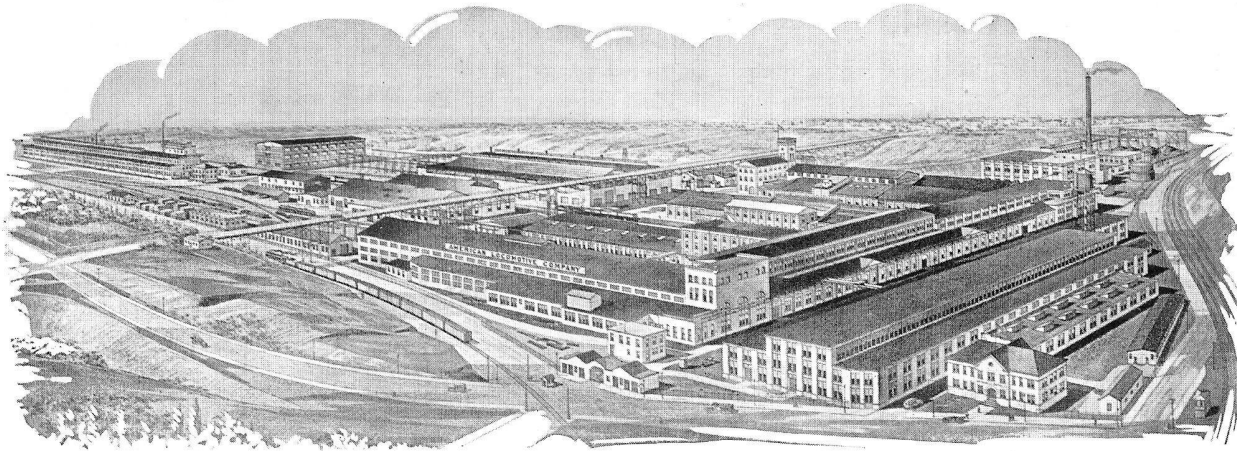
SCHENECTADY WORKS, SCHENECTADY, N. Y.

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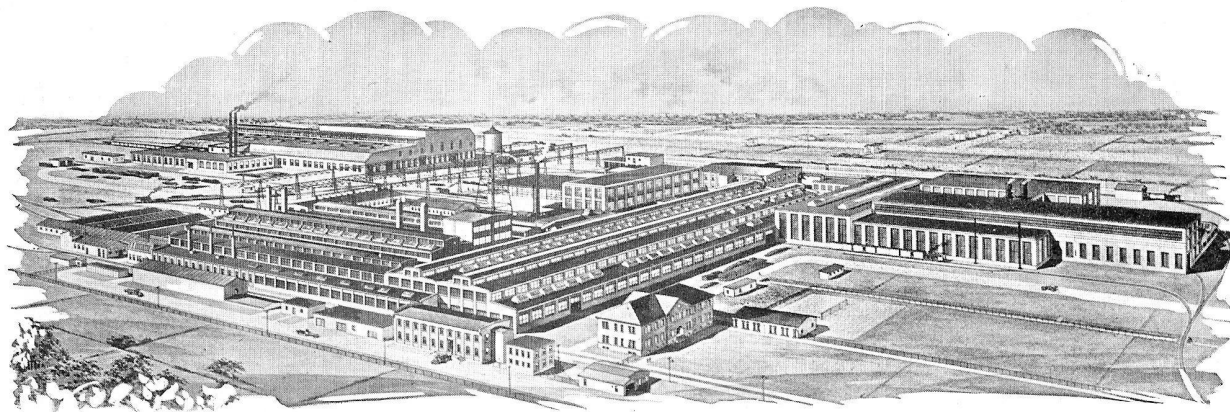
BROOKS WORKS, DUNKIRK, N. Y.

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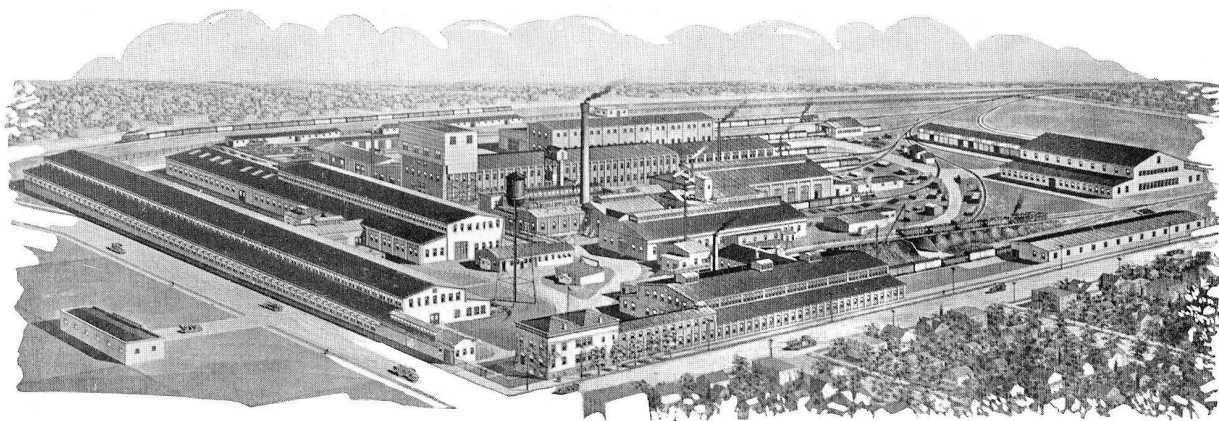
RICHMOND WORKS, RICHMOND, VA.

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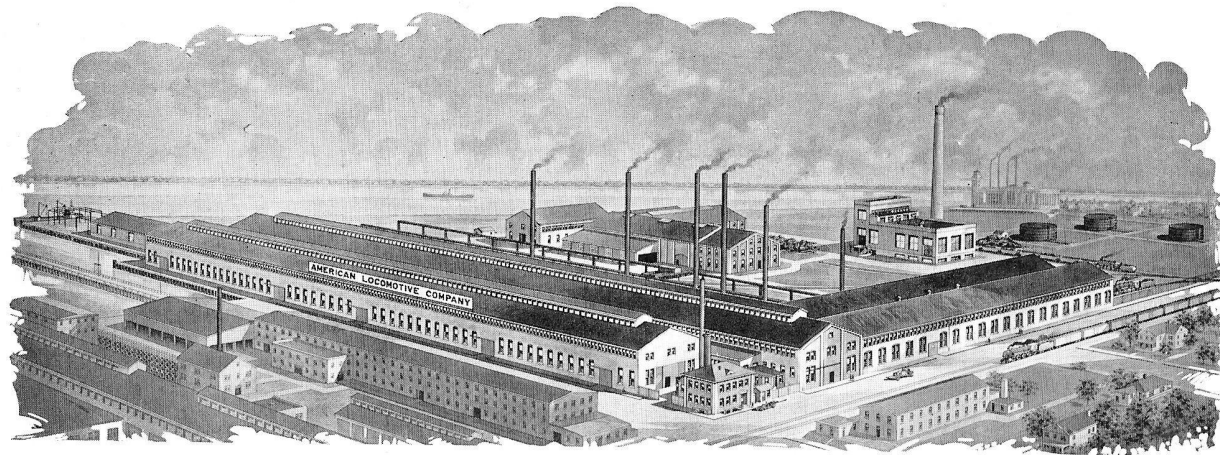
MONTREAL WORKS, MONTREAL, QUEBEC, CANADA

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COOKE WORKS, PATERSON, N. J.

AMERICAN LOCOMOTIVE COMPANY



CHESTER WORKS, CHESTER, PA.

AMERICAN LOCOMOTIVE COMPANY

Light Locomotives

THE Locomotives described and illustrated in this catalog include only those best adapted to the work of contractors rolling mills, industrial plants, mines, logging roads, plantations, and others needing small independent motive power units.

For service consisting mainly of short runs at low speeds, where ability to start and reverse quickly is of first importance, the entire weight should be carried on driving wheels. For longer runs at higher speeds, leading and trailing wheels are recommended to improve riding qualities, guide locomotives around curves, minimize derailments, and reduce flange wear.

The track gage, wheel diameter, cab style, tank capacity, boiler pressure, etc., may be changed to suit working conditions as well as the wishes of the purchaser; grates and draft appliances arranged to suit fuel and with minor changes fuel oil burning equipment may be substituted.

The designs illustrated were carefully prepared by competent engineers who have specialized on this class of locomotive design.

Materials entering into construction meet all recognized requirements for inspection and testing. The use of a complete set of gages, templates, and jigs insure uniformity and interchangeability of corresponding parts for engines of same type and size, enabling the builder to furnish the repair parts on short notice. The workmanship of each part is carefully examined and tested by an efficient corps of inspectors, and when completed each engine is subjected to a running test under steam before leaving the company's works.

AMERICAN LOCOMOTIVE COMPANY

FOUR WHEEL TANK LOCOMOTIVES

0-4-0-T TYPE

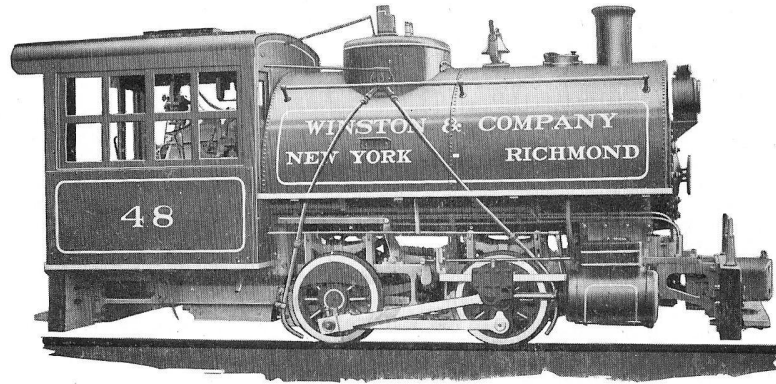
Being simple in construction and small in point of size, locomotives of this type are widely used in the varied service of contractors, industrial plants, mines, quarries, etc., passing freely around sharp curves, climbing steep grades, through restricted clearances, and running on all gages of track.

STANDARD FOUR-WHEEL TANK LOCOMOTIVES. The smaller sizes have cylinders 6" x 12" to 12" x 18", with rear entrance cab; the larger sizes, cylinders 13" x 20" to 18" x 24", side entrance and fuel supply at rear. Notwithstanding their size these locomotives are well proportioned and specially adapted to the work of contractors and industrial plants and for simple duty.

LIMITED CLEARANCE LOCOMOTIVES are a modification of the Standard four-wheel tank locomotives having side tanks instead of saddle tanks and with cab, stack, and other limiting features reduced to admit passage through restricted clearances.

STEEL MILL LOCOMOTIVES are designed for the heavy shifting service of steel rolling mills and furnaces. They are of specially heavy construction with ample bearings and exceptional shock resisting qualities. These engines are recommended for extended periods of continuous service, working at maximum capacity with but ordinary attention and few repairs.

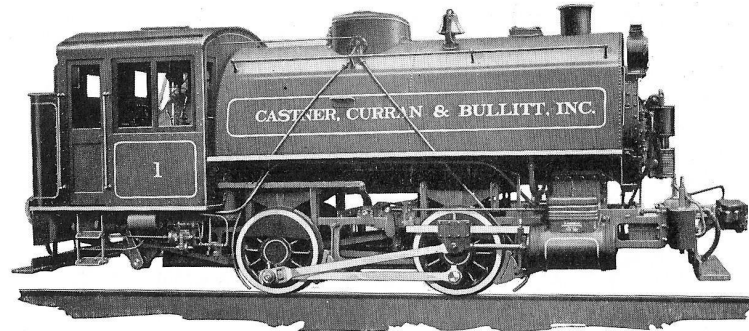
AMERICAN LOCOMOTIVE COMPANY



STANDARD FOUR-WHEEL TANK LOCOMOTIVES 0-4-0-T TYPE REAR ENTRANCE CAB

CODE WORD	Minimum Track Gage inches	Cylinder Diameter and Stroke inches	Driving Wheel Diameter inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	Weight in Working Order pounds	Wheel Base ft.-ins.	Minimum Weight of Rail pounds	Minimum Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
											On Level	On Grades of				
												½%	1%	1½%	2%	3%
UBAYN	24	6x12	24½	165	2470	15000	3-6	15	20	150	230	135	80	55	40	25
UBAZL	24	7x12	24½	165	3360	19000	3-9	20	20	250	310	180	110	75	60	35
UBBAK	24	8x12	24½	165	4400	22000	3-9	25	20	300	410	240	150	105	80	50
UBBEC	30	9x14	27	175	6250	29000	4-6	30	30	600	590	350	210	150	115	75
UBBGY	30	10x16	30½	165	7360	39000	4-9	35	30	700	690	400	240	170	130	85
UBBOH	30	11x16	30½	165	8900	41000	4-9	40	30	900	840	500	300	210	160	105
UBBUX	36	12x18	32	170	11700	53000	5-3	50	40	1100	1110	650	400	280	210	140

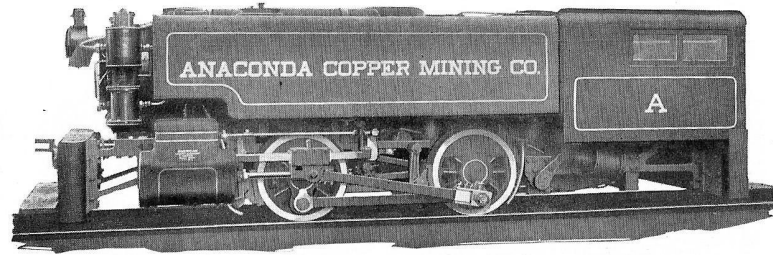
AMERICAN LOCOMOTIVE COMPANY



STANDARD FOUR-WHEEL TANK LOCOMOTIVES 0-4-0-T TYPE SIDE ENTRANCE CAB

CODE WORD	Minimum Track Gage ft.-ins.	Cylinder Diameter and Stroke inches	Driving Wheel Diameter inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	Weight in Working Order pounds	Wheel Base ft.-ins.	Minimum Weight of Rail pounds	Minimum Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
											On Level	On Grades of				
												½%	1%	1½%	2%	3%
UBBYO	36	13x20	36	180	14400	65000	6-3	55	45	1600	1360	810	490	350	260	175
UBCAL	42	14x22	40	190	17400	79000	7-0	65	50	1700	1650	975	590	420	320	210
UBCED	42	16x24	42	180	22400	100000	7-0	80	55	2000	2130	1260	765	545	415	275
UBCIV	4-8½	17x24	44	180	24100	113000	7-6	85	60	2000	2285	1350	820	580	440	290
UBCOI	4-8½	18x24	44	180	27000	120000	7-6	90	65	2000	2565	1520	920	650	500	330

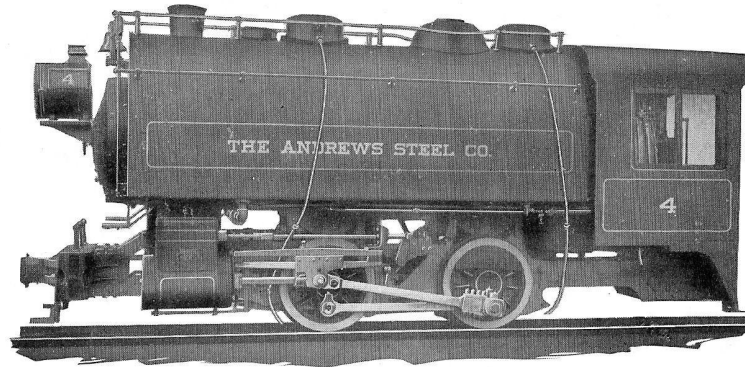
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FOUR-WHEEL TANK LOCOMOTIVES 0-4-0-T TYPE FOR LIMITED CLEARANCES

CODE WORD	Minimum Track Gage inches	Cylinder Diameter and Stroke inches	Driving Wheel Diameter inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	Weight in Working Order pounds	Wheel Base ft.-ins.	Minimum Weight of Rail pounds	Minimum Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
											On Level	On Grades of				
												½%	1%	1½%	2%	3%
UBCUY	24	6x12	24½	165	2470	15000	3-6	15	20	100	230	135	80	55	40	25
UBCYP	24	7x12	24½	165	3360	19000	3-9	20	20	170	310	180	110	75	60	35
UBDAM	24	8x12	24½	165	4400	21000	3-9	25	20	200	415	245	150	105	80	50
UBDOJ	30	9x14	27	175	6250	27000	4-6	30	30	400	590	350	210	150	115	75
UBDUZ	30	10x16	30½	165	7360	37000	4-9	35	30	500	690	405	245	170	130	85
UBDYR	30	11x16	30½	165	8900	39000	4-9	40	30	600	845	500	300	215	165	105
UBEAN	36	12x18	32	170	11700	50000	5-3	45	40	700	1110	660	400	280	215	140
UBEBE	36	13x20	36	180	14400	60000	6-3	55	45	1000	1370	810	495	350	270	180
UBEEF	42	14x22	40	190	17400	74000	7-0	60	50	1100	1655	980	595	420	325	215
UBEFD	42	16x24	42	180	22400	92000	7-0	75	55	1200	2135	1265	770	545	420	280

AMERICAN LOCOMOTIVE COMPANY



**FOUR-WHEEL TANK LOCOMOTIVES 0-4-0-T TYPE
FOR STEEL MILL SERVICE**

CODE WORD	Minimum Track Gage inches	Cylinder Diameter and Stroke inches	Driving Wheel Diameter inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	Weight in Working Order pounds	Wheel Base ft.-ins.	Minimum Weight of Rail pounds	Minimum Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
											On Level	On Grades of				
												½%	1%	1½%	2%	3%
UBEHZ	36	12x18	32	170	11700	55000	5-3	50	40	1100	1105	650	395	280	210	140
UBEKT	36	13x20	36	180	14400	67000	6-3	55	45	1600	1360	805	490	345	260	175
UBELR	36	14x22	40	190	17400	81000	7-0	65	50	1700	1650	975	590	420	320	210
UBEMO	36	15x20	40	170	16250	84000	6-6	70	50	1000	1530	900	545	385	290	190
UBEPI	36	16x24	42	180	22400	99000	7-0	80	55	1800	2130	1260	765	540	415	275
UBERG	36	17x20	42	185	21600	103000	6-0	80	50	1800	2045	1205	730	515	395	260

AMERICAN LOCOMOTIVE COMPANY

FOUR-WHEEL LOCOMOTIVES WITH SEPARATE TENDER

0-4-0 TYPE

This type is used instead of four-wheel tank locomotives for operating conditions requiring a greater water and fuel supply than is possible with tanks carried on engine. Engines with neither saddle nor side tanks have a lower center of gravity and the tendency to derail is accordingly reduced. This feature is more important on very narrow gage roads where it is necessary to keep the center of gravity as low as possible.

FOUR-COUPLED LOCOMOTIVES WITH LEADING TRUCK

2-4-0 TYPE

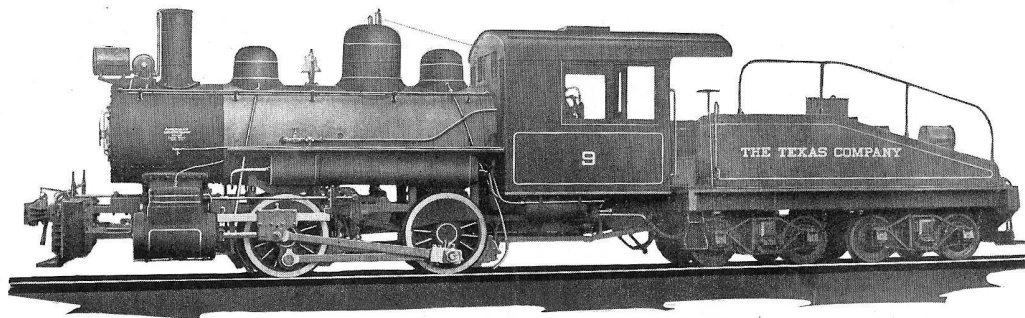
Locomotives of this type are adapted to short road runs, at higher speeds than are practicable with the preceding types. They ride well, run steadily, traverse curves freely and without injury to tracks or excessive flange wear. The leading truck is center bearing with a swing bolster and is equalized with the front drivers, or the drivers are equalized together, each side separately, independent of the truck.

Separate tenders are used mainly to increase the water and fuel carrying capacity.

Moreover, with the elimination of tanks from the engine, the boiler is more accessible for inspection, caulking or washing out, and the engine crew has a better forward view of the tracks.

For switching or double end service, tenders with sloping back tanks are preferred as they afford a better rear view.

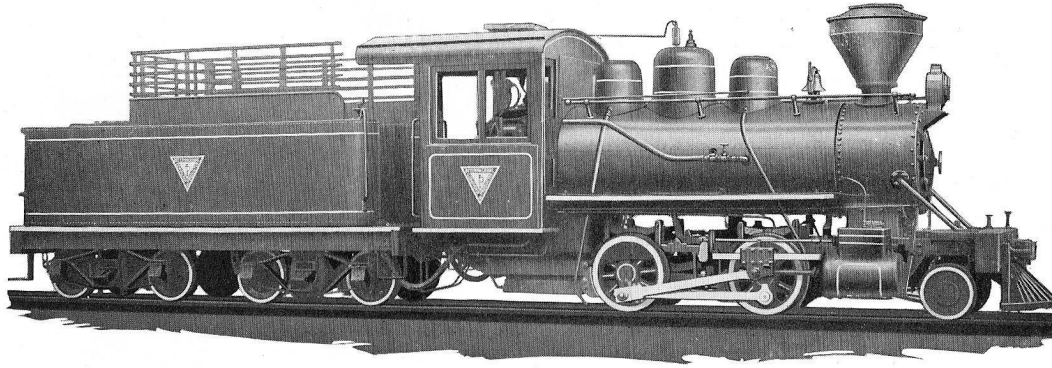
AMERICAN LOCOMOTIVE COMPANY



FOUR-WHEEL LOCOMOTIVES WITH SEPARATE TENDERS 0-4-0 TYPE
FOUR-WHEEL TENDERS UP TO AND INCLUDING 900 GALLONS CAPACITY

CODE WORD	Minimum Track Gage ft.-ins.	Cylinder Diameter and Stroke inches	Driving Wheel Diameter inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	Weight of Engine in Working Order pounds	WHEEL BASE		Minim. Weight of Rail pounds	Minim. Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
							Engine ft.-ins.	Eng. and Tender ft.-ins.				On Level	On Grades of				
													½%	1%	1½%	2%	3%
UBESE	30	9x14	27	165	5900	25000	4-6	18-0	25	30	500	550	320	190	135	100	65
UBEVY	30	10x16	30½	165	7360	34000	4-9	19-0	35	30	700	690	400	240	170	125	80
UBEYS	30	11x16	30½	165	8900	35000	4-9	19-0	35	30	900	840	490	300	210	160	100
UBEZP	36	12x18	32	150	10300	43000	5-3	27-6	40	40	1200	960	570	340	230	180	110
UBFEG	36	13x20	36	150	12000	47000	6-3	28-6	45	45	1500	1130	660	400	280	210	130
UBFOL	42	14x22	40	150	13700	60000	7-0	31-0	55	50	2000	1280	750	450	310	200	120
UBFUB	42	16x24	44	150	17800	77000	7-0	33-6	65	55	2500	1660	970	580	400	300	190
UBFYT	4-8½	17x24	46	180	23000	95000	7-6	36-0	75	65	3000	2160	1265	755	525	395	250
UBGAP	4-8½	18x24	46	180	25800	104000	7-6	37-0	80	65	3500	2425	1425	855	595	450	285
UBGEH	4-8½	19x24	46	180	28800	110000	7-6	38-0	85	65	4000	2715	1595	955	670	500	320

AMERICAN LOCOMOTIVE COMPANY



FOUR-COUPLED LOCOMOTIVES WITH LEADING TRUCK 2-4-0 TYPE FOUR-WHEEL TENDERS UP TO AND INCLUDING 900 GALLONS CAPACITY

CODE WORD	Minim. Track Gage	Cylinder Diam. and Stroke	Driving Wheel Diam.	Boiler Press.	Tractive Power	WEIGHT IN WORKING ORDER		WHEEL BASE			Minim. Weight of Rail	Minim. Radius of Curve	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers	Engine	Driving	Engine	Eng. and Ten. ft.-ins.				On Level	On Grades of				
															ft.-ins.	ft.-ins.	ft.-ins.	½%	1%
UBGIZ	30	11x16	30½	150	8100	33000	37000	4-9	10-9	25-6	35	65	900	760	440	270	180	140	90
UBGIZ	36	12x18	32	150	10300	41000	46000	5-3	11-8	33-6	40	75	1200	960	570	340	230	180	110
UBGIZ	36	13x20	36	150	12000	47000	52000	6-3	12-11	35-0	45	90	1500	1130	660	400	280	210	130
UBHAR	42	14x22	40	150	13700	58000	65000	7-0	14-5	38-6	50	110	2000	1280	750	450	310	230	145

AMERICAN LOCOMOTIVE COMPANY

FOUR-COUPLED TANK LOCOMOTIVES WITH TRAILING TRUCK

0-4-2-T TYPE

These locomotives are suitable for switching and light road service where water may be taken frequently. Either saddle or side tanks may be used.

Front drivers are equalized together transversely. Rear drivers are equalized with the trailing truck.

Due to increased stability afforded by the application of a trailing truck, locomotives of this type run smoothly, ride well, and take curves easily.

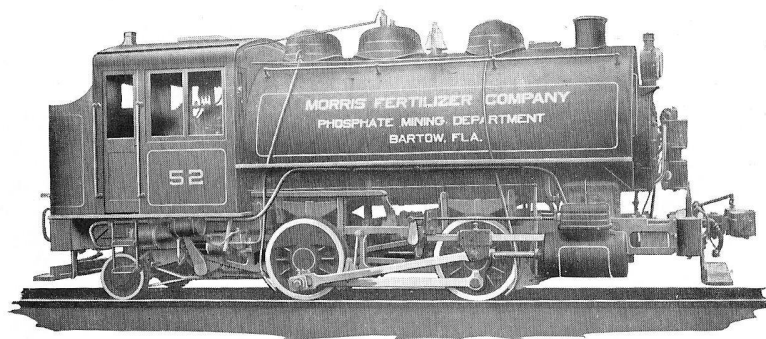
FORNEY FOUR-COUPLED TANK LOCOMOTIVES

0-4-4-T TYPE

Forney type locomotives are used for runs of considerable length where water stations are not too far apart. They are highly successful in suburban passenger service running in either direction without turning.

With water tank at rear and a large efficient boiler, with driving spring weights equalized together, and a center bearing trailing truck, these powerful, easy riding locomotives start quickly, run fast, and have an excellent service record.

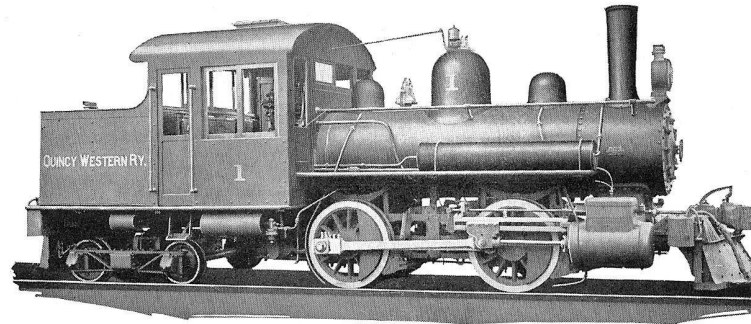
AMERICAN LOCOMOTIVE COMPANY



FOUR-COUPLED TANK LOCOMOTIVES WITH TRAILING TRUCK 0-4-2-T TYPE EITHER SADDLE OR SIDE TANKS

CODE WORD	Minimum Track Gage inches	Cylinder Diameter and Stroke inches	Driving Wheel Diam. inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	WEIGHT IN WORKING ORDER		WHEEL BASE		Minim. Weight of Rail pounds	Minim. Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers pounds	Engine pounds	Driving ft.-ins.	Engine ft.-ins.				On Level	On Grades of				
														½%	1%	1½%	2%	3%
UBHIA	30	9x14	27	175	6250	29000	33000	4-6	10-9	30	70	600	590	350	210	150	115	75
UBHON	30	10x16	30½	165	7360	38000	44000	4-9	12-3	35	90	700	690	400	240	170	130	85
UBHUD	30	11x16	30½	165	8900	40000	46000	4-9	12-3	40	90	900	840	500	300	210	160	105
UBHYR	36	12x18	32	170	11700	51000	58000	5-3	12-9	45	100	1100	1110	650	400	280	210	140
UBIAS	36	13x20	36	180	14400	62000	71000	6-3	14-4	55	120	1600	1360	810	490	350	260	175
UBIDL	42	14x22	40	180	16500	73000	83000	7-0	15-1	60	135	1700	1560	920	560	400	300	200
UBIGF	42	16x24	42	180	22400	92000	106000	7-0	16-0	75	150	2000	2135	1220	750	540	410	270

AMERICAN LOCOMOTIVE COMPANY



FORNEY FOUR-COUPLED TANK LOCOMOTIVES 0-4-4-T TYPE

CODE WORD	Minimum Track Gage inches	Cylinder Diameter and Stroke inches	Driving Wheel Diam. inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	WEIGHT IN WORKING ORDER		WHEEL BASE		Minim. Weight of Rail pounds	Minim. Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers pounds	Engine pounds	Driving ft.-ins.	Engine ft.-ins.				On Level	On Grades of				
UBILV	30	9x14	27	150	5360	25000	36000	4-6	14-6	25	100	600	500	½%	1%	1½%	2%	3%
UBIMT	30	10x16	30½	150	6700	34000	46000	4-9	15-10	35	125	700	620	360	210	150	110	70
UBINR	30	11x16	30½	150	8100	35000	48000	4-9	15-10	35	125	900	760	440	270	180	140	90
UBIRK	36	12x18	32	150	10300	42000	62000	5-3	17-6	40	150	1100	960	570	340	230	180	110
UBISI	36	13x20	36	150	12000	51000	74000	6-3	20-0	45	180	1300	1130	660	400	280	210	130
UBIWA	42	14x22	40	150	13700	60000	86000	7-0	21-0	55	200	1500	1280	750	450	310	230	145
UBIXY	42	16x24	44	150	17800	76000	106000	7-0	22-0	65	225	1700	1660	970	580	400	300	190

AMERICAN LOCOMOTIVE COMPANY

FOUR-COUPLED DOUBLE END LOCOMOTIVES

2-4-2 TYPE

Locomotives of this type are well adapted to the service of logging roads and others having uneven roadbeds, light rails, and many curves. Having a short driving wheel base and swing center leading and trailing trucks, these flexible locomotives pass safely over yielding rails, around curves, or through switches, running with equal facility in either direction. The leading center bearing truck equalized with the front drivers, and the trailing side bearing truck equalized with the rear drivers, form an ideal 3-point suspension in which all wheels adjust themselves continually to the varying positions of rails.

Saddle tanks, side tanks, or separate tenders are provided, according to the length of run or to the conditions governing the water and fuel supply.

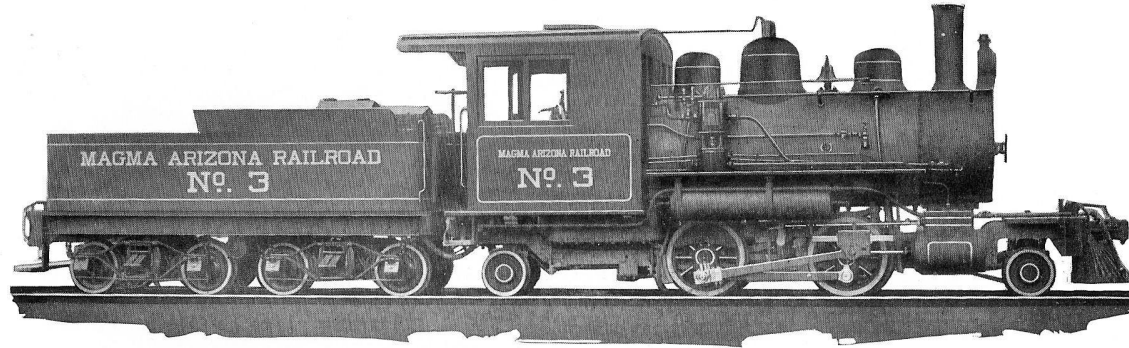
AMERICAN LOCOMOTIVE COMPANY



FOUR-COUPLED DOUBLE END TANK LOCOMOTIVES 2-4-2-T TYPE
EITHER SADDLE OR SIDE TANK

CODE WORD	Minimum Track Gage inches	Cylinder Diameter and Stroke inches	Driving Wheel Diam. inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	WEIGHT IN WORKING ORDER		WHEEL BASE		Minim. Weight of Rail pounds	Minim. Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers pounds	Engine pounds	Driving ft.-ins.	Engine ft.-ins.				On Level	On Grades of				
														½%	1%	1½%	2%	3%
UBIZU	30	9x14	27	175	6250	27000	35000	4-6	16-0	30	70	600	590	350	210	150	115	75
UBJAT	30	10x16	30½	165	7360	34000	46000	4-9	17-8	35	90	700	690	400	240	170	130	85
UBJEK	30	11x16	30½	165	8900	36000	48000	4-9	17-8	35	90	900	840	500	300	210	160	105
UBJIC	36	12x18	32	170	11700	48000	61000	5-3	18-7	45	100	1100	1110	650	400	280	210	140
UBJOP	36	13x20	36	180	14400	58000	74000	6-3	20-3	50	120	1600	1360	810	490	350	260	175
UBJUF	42	14x22	40	180	16500	68000	86000	7-0	22-1	55	135	1700	1560	920	560	400	300	200
UBJYX	42	16x24	44	180	21400	86000	110000	7-0	23-10	70	150	2000	2030	1200	730	510	390	260

AMERICAN LOCOMOTIVE COMPANY



FOUR-COUPLED DOUBLE END LOCOMOTIVES 2-4-2 TYPE FOUR-WHEEL TENDERS UP TO AND INCLUDING 900 GALLONS CAPACITY

CODE WORD	Minim. Track Gage	Cylinder Diam. and Stroke	Driving Wheel Diam.	Boiler Press.	Tractive Power	WEIGHT IN WORKING ORDER		WHEEL BASE			Minim. Weight of Rail	Minim. Radius of Curve	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers	Engine	Driving	Engine	Eng. and Ten.				On Level	On Grades of				
															pounds	pounds	ft.-ins.	ft.-ins.	ft.-ins.
UBKAM	30	9x14	27	150	5360	22000	29000	4-6	16-0	25-0	25	70	500	500	290	175	120	90	55
UBKEL	30	10x16	30½	150	6700	30000	38000	4-9	17-8	27-0	30	90	700	620	360	210	150	110	70
UBKID	30	11x16	30½	150	8100	31000	39000	4-9	17-8	27-0	30	90	900	760	440	270	180	140	90
UBKOR	36	12x18	32	150	10300	39000	49000	5-3	18-7	34-6	40	100	1200	960	570	340	230	180	110
UBKUG	36	13x20	36	150	12000	46000	56000	6-3	20-3	36-6	40	120	1500	1130	660	400	280	210	130
UBLAV	42	14x22	40	150	13700	56000	68000	7-0	22-1	40-0	50	135	2000	1280	750	450	310	230	145
UBLEM	42	16x24	44	150	17800	70000	86000	7-0	23-10	42-10	55	150	2500	1660	970	580	400	300	190

AMERICAN LOCOMOTIVE COMPANY

FOUR-COUPLED LOCOMOTIVES—EIGHT WHEEL

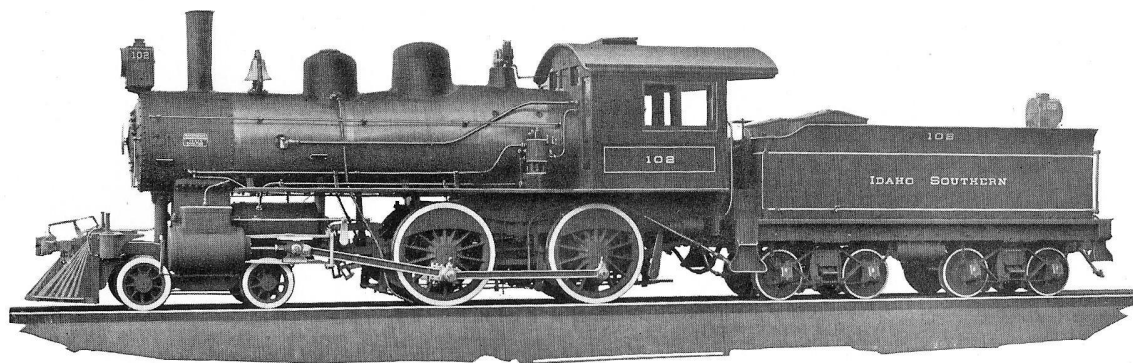
4-4-0 TYPE

The Eight Wheel or American type locomotive for many years held a leading place on American railroads. While especially adapted to passenger service it was used with success in all classes of road service. Engines of this type are now operating on small roads and branch lines where the weights of trains are not excessive.

The four wheel leading truck is center bearing. Front and back driving spring weights are equalized together, each side independently. These engines run at high speed with little vibration, keep the rails, show slight flange wear, and are easy on the tracks.

This type of locomotive, within the limits of its capacity, presents the simplest and most satisfactory wheel arrangement for general road service.

AMERICAN LOCOMOTIVE COMPANY



FOUR-COUPLED LOCOMOTIVES WITH SEPARATE TENDERS 4-4-0 TYPE
AMERICAN—EIGHT-WHEEL

CODE WORD	Minim. Track Gage ft.-ins.	Cylinder Diam. and Stroke inches	Driving Wheel Diam. inches	Boiler Press. lb. per sq. in.	Tractive Power pounds	WEIGHT IN WORKING ORDER		WHEEL BASE			Minim. Weight of Rail pounds	Minim. Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers pounds	Engine pounds	Driving ft.-ins.	Engine ft.-ins.	Eng. and Ten. ft.-ins.				On Level	On Grades of				
															½%	1%	1½%	2%	3%
UCAIS	4-8½	16x24	62	180	15100	60000	95000	8-6	22-11	46-0	55	250	3000	1390	805	470	320	235	140
UCAKN	4-8½	17x24	62	180	17100	70000	110000	9-1	23-6	47-0	55	250	3500	1570	905	530	360	260	155
UCAPD	4-8½	18x24	62	180	19200	75000	115000	8-0	22-8	49-0	60	250	4000	1770	1020	600	405	295	175
UCARB	4-8½	19x26	68	180	21100	90000	135000	8-6	23-10	56-6	70	250	5000	1930	1100	645	435	315	180

AMERICAN LOCOMOTIVE COMPANY

SIX-WHEEL SWITCHING LOCOMOTIVES

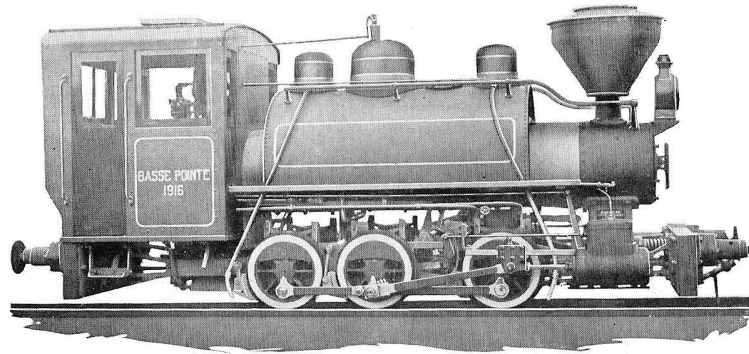
0-6-0 TYPE

Six-coupled locomotives are adapted to the work of contractors, industrial plants, and railroad terminal switching service for work exceeding the capacity of the four-coupled types.

Saddle or side tank locomotives are suitable for contractors, industrial plants, mines, etc. Separate tenders are furnished for conditions where the capacity of side or saddle tanks is inadequate. Also for very narrow gage roads where saddle or side tanks, when filled with water, would raise the center of gravity of the engine too high for safety.

Front drivers on right and left sides are equalized transversely. Intermediate and rear drivers on each side are equalized together, each side independently. With equalized spring arrangement and longer wheel base, these locomotives ride more smoothly, keep the rails better, and are easier on tracks than four-coupled locomotives not having leading or trailing trucks.

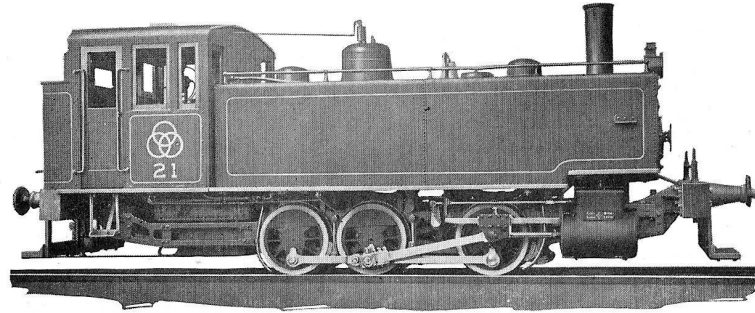
AMERICAN LOCOMOTIVE COMPANY



SIX-WHEEL TANK LOCOMOTIVES 0-6-0-T TYPE
SADDLE TANK

CODE WORD	Minimum Track Gage inches	Cylinder Diameter and Stroke inches	Driving Wheel Diameter inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	Weight in Working Order pounds	Wheel Base ft.-ins.	Minimum Weight of Rail pounds	Minimum Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
											On Level	On Grades of				
												½%	1%	1½%	2%	3%
UBLIC	24	6x12	21½	165	2820	19000	5-0	15	35	150	260	150	90	60	45	30
UBLOS	24	7x12	24½	165	3360	23000	5-9	20	40	250	310	180	110	75	60	35
UBLUH	24	8x12	24½	165	4400	27000	5-9	20	40	300	410	240	150	105	80	50
UBLYZ	30	9x14	27	175	6250	35000	6-3	25	45	600	590	350	210	150	115	75
UBMAN	30	10x16	30½	165	7360	47000	6-6	30	50	700	690	400	240	170	130	85
UBMIF	30	11x16	30½	165	8900	49000	6-6	35	50	900	840	500	300	210	160	105
UBMOT	36	12x18	32	170	11700	60000	7-6	40	65	1100	1100	650	400	280	210	140
UBMUI	36	13x20	36	180	14400	74000	7-6	45	65	1600	1360	810	490	350	260	175
UBNAX	42	14x22	40	190	17400	88000	8-6	50	80	1700	1640	965	585	410	315	205

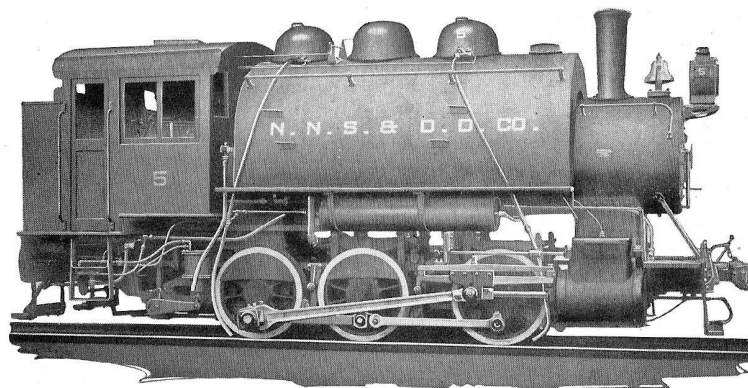
AMERICAN LOCOMOTIVE COMPANY



SIX-WHEEL TANK LOCOMOTIVES 0-6-0-T TYPE
SIDE TANK

CODE WORD	Minimum Track Gage inches	Cylinder Diameter and Stroke inches	Driving Wheel Diameter inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	Weight in Working Order pounds	Wheel Base ft.-ins.	Minimum Weight of Rail pounds	Minimum Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
											On Level	On Grades of				
												½%	1%	1½%	2%	3%
UBNES	24	6x12	21½	165	2820	19000	5-0	15	35	150	260	150	90	60	45	30
UBNIG	24	7x12	24½	165	3360	23000	5-9	20	40	250	310	180	110	75	60	35
UBNOU	24	8x12	24½	165	4400	27000	5-9	20	40	300	410	240	150	105	80	50
UBNUJ	30	9x14	27	175	6250	35000	6-3	25	45	600	590	350	210	150	115	75
UBNYB	30	10x16	30½	165	7360	47000	6-6	30	50	700	690	400	240	170	130	85
UBOCU	30	11x16	30½	165	8900	49000	6-6	35	50	900	840	500	300	210	160	105
UBODS	36	12x18	32	170	11700	60000	7-6	40	65	1100	1100	650	400	280	210	140
UBOGL	36	13x20	36	180	14400	74000	7-6	45	65	1600	1360	810	490	350	260	175
UBOKD	42	14x22	40	190	17400	88000	8-6	50	80	1700	1640	965	585	410	315	205

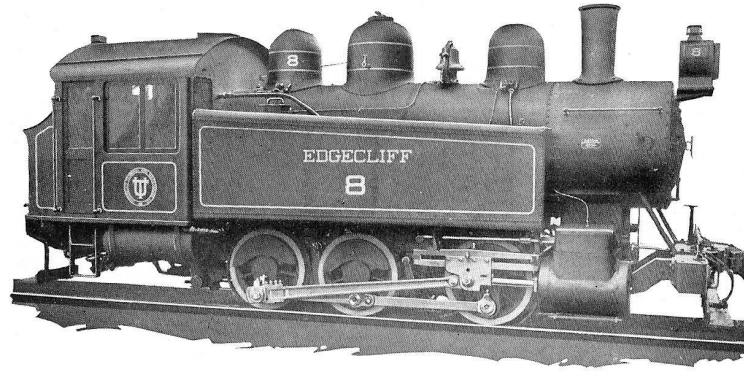
AMERICAN LOCOMOTIVE COMPANY



SIX-WHEEL TANK LOCOMOTIVES 0-6-0-T TYPE
SADDLE TANK

CODE WORD	Minimum Track Gage ft.-ins.	Cylinder Diameter and Stroke inches	Driving Wheel Diameter inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	Weight in Working Order pounds	Wheel Base ft.-ins.	Minimum Weight of Rail feet	Minimum Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
											On Level	On Grades of				
												½%	1%	1½%	2%	3%
UBOLB	4-8½	16x24	44	180	21400	100000	10-2	55	100	1500	2030	1200	730	510	390	260
UBOMZ	4-8½	17x24	44	180	24100	118000	10-0	60	100	1700	2280	1345	815	575	440	290
UBONX	4-8½	18x24	44	180	27000	124000	10-6	65	100	1700	2560	1515	920	650	495	330
UBOPT	4-8½	19x24	44	180	30000	135000	10-0	70	100	1700	2850	1685	1025	725	555	365

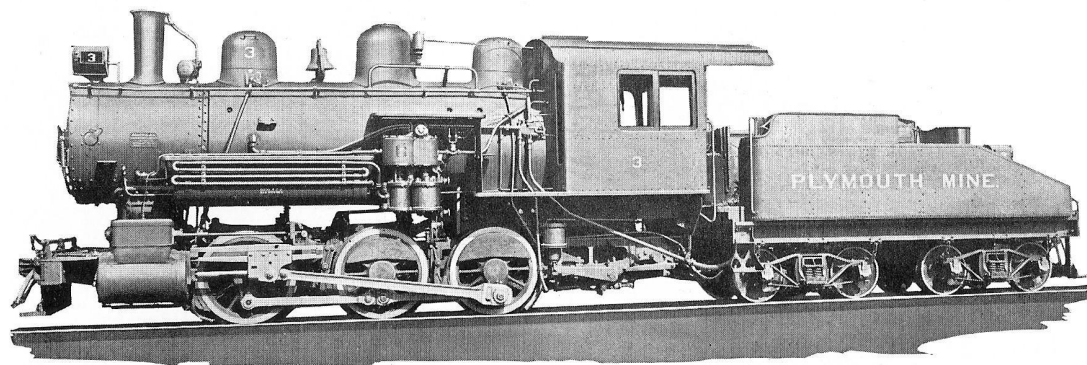
AMERICAN LOCOMOTIVE COMPANY



SIX-WHEEL TANK LOCOMOTIVES 0-6-0-T TYPE
SIDE TANK

CODE WORD	Minimum Track Gage ft.-ins.	Cylinder Diameter and Stroke inches	Driving Wheel Diameter inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	Weight in Working Order pounds	Wheel Base pounds	Minimum Weight of Rail pounds	Minimum Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
											On Level	On Grades of				
												½%	1%	1½%	2%	3%
UBOSO	4-8½	16x24	44	180	21400	100000	10-2	55	100	1500	2030	1200	730	510	390	260
UBOTM	4-8½	17x24	44	180	24100	118000	10-0	60	100	1700	2280	1345	815	575	440	290
UBOVI	4-8½	18x24	44	180	27000	124000	10-6	65	100	1700	2560	1515	920	650	495	330
UBOXE	4-8½	19x24	44	180	30000	135000	10-0	70	100	1700	2850	1685	1025	725	555	365

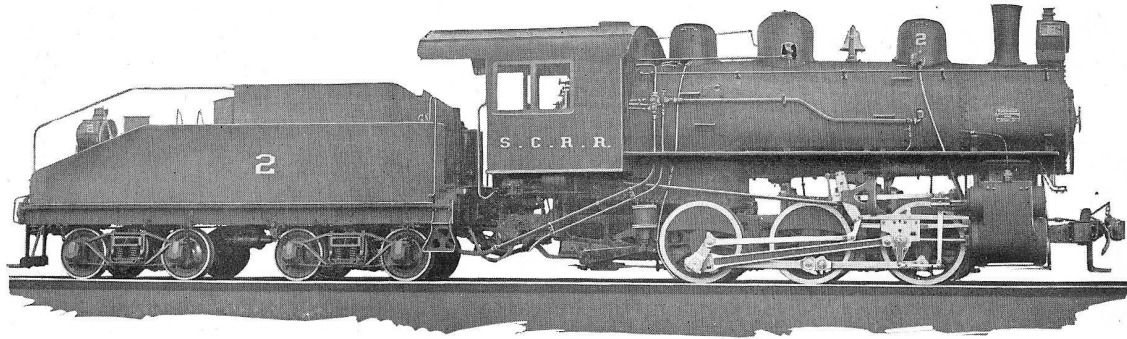
AMERICAN LOCOMOTIVE COMPANY



SIX-WHEEL SWITCHING LOCOMOTIVES WITH SEPARATE TENDERS 0-6-0 TYPE

CODE WORD	Minimum Track Gage	Cylinder Diameter and Stroke	Driving Wheel Diameter	Boiler Pressure	Tractive Power	Weight in Working Order	WHEEL BASE		Minim. Weight of Rail	Minim. Radius of Curve	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
							Engine	Eng. & Tender ft.-ins.				On Level	On Grades of				
													½%	1%	1½%	2%	3%
UBOZA	4-8½	16x24	46	180	20400	84000	10-2	34-0	50	100	2500	1920	1125	675	470	355	225
UBPAZ	4-8½	17x24	50	180	21200	100000	10-0	38-2	55	100	3000	1975	1150	685	475	355	220
UBPER	4-8½	18x24	50	180	23800	105000	10-6	39-4	55	100	3500	2225	1295	775	540	405	255
UBPOW	4-8½	19x26	50	180	28700	120000	11-0	41-0	65	125	4000	2695	1575	940	655	490	310
UBPUL	4-8½	20x26	50	180	31800	130000	11-0	44-1	70	125	4500	2990	1750	1050	730	550	350
UBPYD	4-8½	21x26	50	180	35100	142000	11-0	44-9	75	125	5000	3300	1940	1160	810	610	390

AMERICAN LOCOMOTIVE COMPANY



SIX-WHEEL SWITCHING LOCOMOTIVES WITH SEPARATE TENDERS 0-6-0 TYPE

CODE WORD	Minimum Track Gage	Cylinder Diameter and Stroke	Driving Wheel Diameter	Boiler Pressure	Tractive Power	Weight in Working Order	WHEEL BASE		Minim. Weight of Rail	Minim. Radius of Curve	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
							Driving	Engine				On Level	On Grades of				
													½%	1%	1½%	2%	3%
UCSES	4-8½	19x26	50	180	28700	120000	11-0	41-0	65	125	4000	2695	1575	940	655	490	310
UCSOX	4-8½	20x26	50	180	31800	130000	11-0	44-1	70	125	4500	2990	1750	1050	730	550	350
UCSTO	4-8½	21x26	50	180	35100	142000	11-6	44-9	75	125	5000	3300	1940	1160	810	610	390

AMERICAN LOCOMOTIVE COMPANY

MOGUL LOCOMOTIVES

2-6-0 TYPE

While primarily a freight locomotive the Mogul is very generally used and gives excellent satisfaction in all classes of road service. It is most suitable for short roads and branch lines where high speeds are not required and train weights are not excessive.

The leading truck is equalized with the front drivers. Intermediate and rear drivers are equalized together. These locomotives run steadily and take curves easily at moderate speeds.

Both Mogul and Ten-Wheel locomotives are designed with three styles of back end arrangement, each of which has advantages under special conditions:

First—A deep firebox over frames at the rear of driving wheels for narrow gage designs.

Second—A firebox over frames but between driving wheels—the usual arrangement for standard gage designs.

Third—A wide firebox over rear drivers for conditions requiring a very large grate area.

TEN-WHEEL LOCOMOTIVES

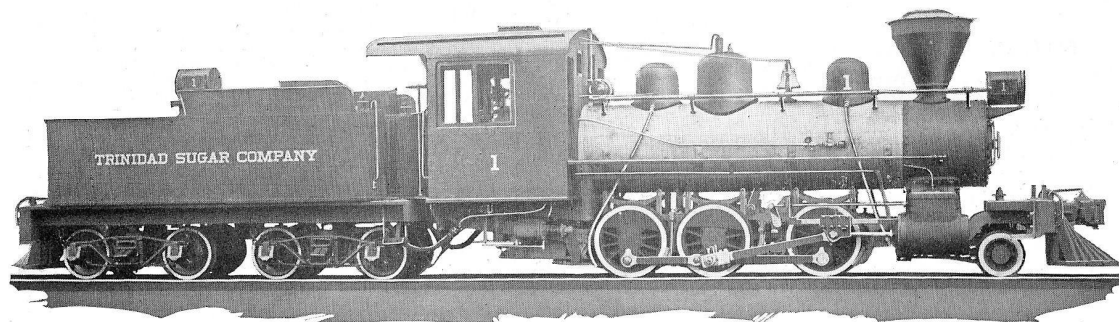
4-6-0 TYPE

Ten-wheel locomotives are much used in passenger and fast freight service. The diameter of drivers and valve setting are varied with the class of service, weight of trains, and operating conditions.

The leading truck is center bearing and has a swing bolster. Front, intermediate, and rear driving spring weights are equalized together, right and left sides independently.

These engines run steadily at high speeds with slight wear on either wheel flanges or rails.

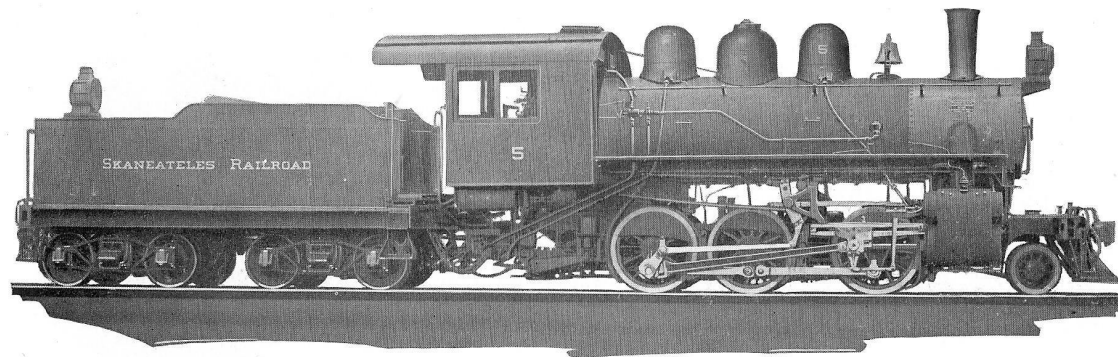
AMERICAN LOCOMOTIVE COMPANY



MOGUL LOCOMOTIVES 2-6-0 TYPE

CODE WORD	Minim. Track Gage	Cylinder Diam. and Stroke	Driving Wheel Diam.	Boiler Press. lb. per sq. in.	Tractive Power pounds	WEIGHT IN WORKING ORDER		WHEEL BASE			Minim. Weight of Rail pounds	Minim. Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers pounds	Engine pounds	Driving ft.-ins.	Engine ft.-ins.	Eng. and Ten. ft.-ins.				On Level	On Grades of				
	1½%	1%	1½%	2%	3%														
UCSUM	30	11x16	30½	165	8900	34000	38000	6-6	12-6	27-0	25	90	900	840	490	300	210	160	100
UCSWI	36	12x18	32	165	11360	44000	48000	7-6	14-1	36-0	30	110	1200	1070	630	370	260	200	125
UCTAB	36	13x20	36	165	13200	50000	56000	7-6	14-2	36-6	35	110	1500	1240	730	440	300	230	150
UCTET	42	14x22	40	165	15100	62000	68000	8-6	15-11	40-0	40	130	2000	1410	830	490	340	260	160

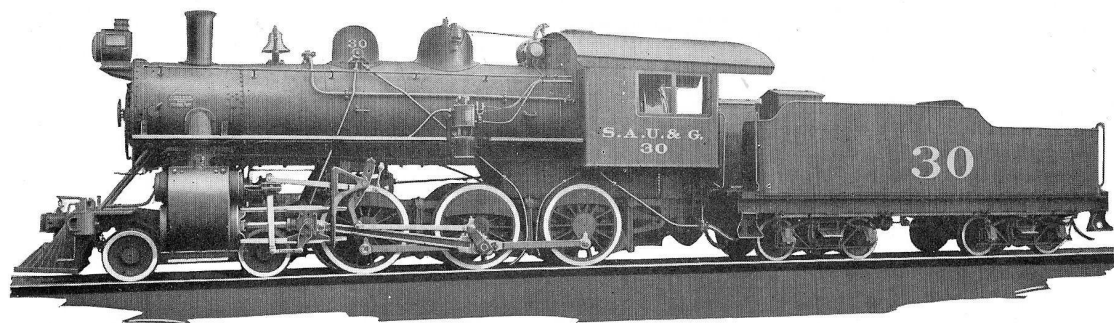
AMERICAN LOCOMOTIVE COMPANY



MOGUL LOCOMOTIVES 2-6-0 TYPE

CODE WORD	Minim. Track Gage ft.-ins.	Cylinder Diam. and Stroke inches	Driving Wheel Diam. inches	Boiler Press. lb. per sq. in.	Tractive Power pounds	WEIGHT IN WORKING ORDER		WHEEL BASE			Minim. Weight of Rail pounds	Minim. Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers pounds	Engine pounds	Driving ft.-ins.	Engine ft.-ins.	Eng. and Ten. ft.-ins.				On Level	On Grades of				
															½%	1%	1½%	2%	3%
UCTIK	4-8½	16x24	46	160	18200	73000	85000	10-2	17-4	43-9	45	150	3500	1720	1000	600	420	310	200
UCTOY	4-8½	17x24	50	180	21200	96000	108000	10-0	17-4	45-6	55	150	3500	1965	1140	675	465	345	215
UCTRU	4-8½	18x24	50	180	23800	94000	114000	10-0	19-10	46-8½	55	200	4000	2210	1290	770	530	390	240
UCTUN	4-8½	19x26	50	180	28700	116000	131000	14-0	22-1	50-4	60	200	5000	2675	1560	925	640	475	295
UCTYF	4-8½	19x26	56	180	25600	117000	132000	14-0	22-1	50-4	60	200	5000	2360	1370	810	555	410	250
UCUBA	4-8½	20x26	56	180	28400	119000	137000	14-0	22-3	51-0	65	200	5000	2640	1535	910	630	470	290

AMERICAN LOCOMOTIVE COMPANY



TEN-WHEEL LOCOMOTIVES 4-6-0 TYPE

CODE WORD	Minim. Track Gage	Cylinder Diam. and Stroke	Driving Wheel Diam.	Boiler Press.	Tractive Power	WEIGHT IN WORKING ORDER		WHEEL BASE			Minim. Weight of Rail	Minim. Radius of Curve	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers	Engine	Driving	Engine	Eng. and Ten.				On Level	On Grades of				
															ft.-ins.	pounds	ft.-ins.	ft.-ins.	½%
UCUCY	4-8½	18x24	50	180	23800	92000	120000	11-0	21-3	48-0	50	200	4000	2220	1290	760	525	390	240
UCUFS	4-8½	18x24	56	180	21300	93000	121000	11-0	21-3	48-0	50	200	4000	1965	1135	670	455	335	200
UCUHN	4-8½	19x26	56	180	25650	103000	134000	13-0	23-8	52-1	55	225	5000	2380	1380	810	555	410	250
UCULF	4-8½	19x26	62	180	23200	104000	135000	13-0	23-8	52-1	55	225	5000	2130	1230	715	485	355	215
UCUMD	4-8½	20x26	56	180	28400	110000	147000	14-0	25-0	53-0	60	250	5000	2640	1525	905	620	460	285
UCUNB	4-8½	20x26	62	180	25700	111000	148000	14-0	25-1	53-1	60	250	5000	2370	1370	805	545	400	240

AMERICAN LOCOMOTIVE COMPANY

SIX-COUPLED DOUBLE END LOCOMOTIVES

2-6-2 TYPE

This double-end locomotive is of special value on logging roads and for similar conditions where temporary tracks are used and many curves necessary. Engines with water tanks at each side or a saddle tank over top of boiler are used for short runs. For runs requiring additional tank capacity, a separate tender is provided.

The leading and trailing trucks are center bearing with bolsters arranged to give required lateral motion. The leading truck is equalized with the front drivers and the trailing truck with intermediate and rear drivers. With this flexible arrangement, all wheels are adjusted to uneven rails; also the locomotive takes curves easily and runs smoothly and equally well in either direction.

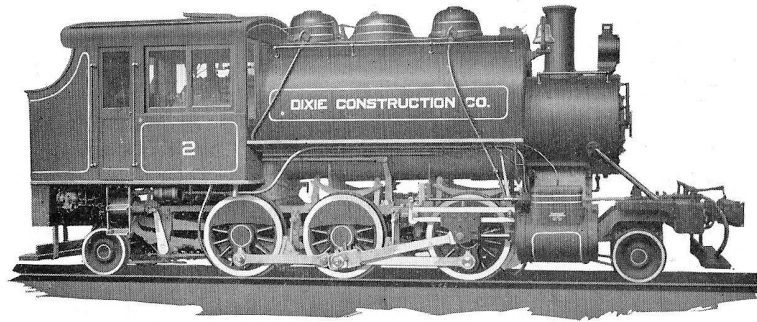
AMERICAN LOCOMOTIVE COMPANY



SIX-COUPLED DOUBLE END TANK LOCOMOTIVES 2-6-2-T TYPE EITHER SADDLE OR SIDE TANKS

CODE WORD	Minimum Track Gage inches	Cylinder Diameter and Stroke inches	Driving Wheel Diam. inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	WEIGHT IN WORKING ORDER		WHEEL BASE		Minim. Weight of Rail pounds	Minim. Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers pounds	Engine pounds	Driving ft.-ins.	Engine ft.-ins.				On Level	On Grades of				
														½%	1%	1½%	2%	3%
UCURV	30	9x14	27	175	6250	29000	39000	6-3	18-1	20	90	600	590	340	200	145	110	70
UCUST	30	10x16	30½	165	7360	39000	51000	6-6	20-0	25	100	700	680	400	240	165	125	80
UCUTR	30	11x16	30½	165	8900	40000	53000	6-6	20-0	30	100	900	840	490	290	210	155	100
UCUVM	36	12x18	32	170	11700	52000	67000	7-6	21-7	35	110	1100	1100	650	390	270	210	135
UCUXI	36	13x20	36	180	14400	65000	82000	7-6	22-3	40	110	1600	1360	800	480	340	260	165
UCUZE	42	14x22	40	190	17400	74000	96000	8-6	24-0	45	130	1700	1645	965	580	410	310	200

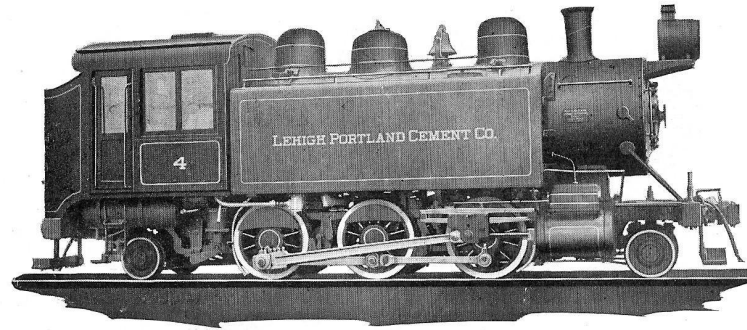
AMERICAN LOCOMOTIVE COMPANY



SIX-COUPLED DOUBLE END TANK LOCOMOTIVES 2-6-2-T TYPE
SADDLE TANK

CODE WORD	Minimum Track Gage ft. ins.	Cylinder Diameter and Stroke inches	Driving Wheel Diam. inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	WEIGHT IN WORKING ORDER		WHEEL BASE		Minim. Weight of Rail pounds	Minim. Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers pounds	Engine pounds	Driving ft.-ins.	Engine ft.-ins.				On Level	On Grades of				
														½%	1%	1½%	2%	3%
UCVAD	4-8½	16x24	44	180	21400	86000	109000	10-2	24-1	50	150	1300	2030	1195	725	510	390	255
UCVER	4-8½	17x24	44	180	24100	104000	135000	10-6	24-10	55	150	1400	2275	1340	805	565	430	280
UCVIM	4-8½	18x24	46	180	25800	110000	140000	10-6	24-10	60	175	2000	2440	1435	870	610	465	300
UCVUP	4-8½	19x24	46	180	28800	120000	155000	10-0	25-0	65	175	2500	2730	1620	980	690	530	345

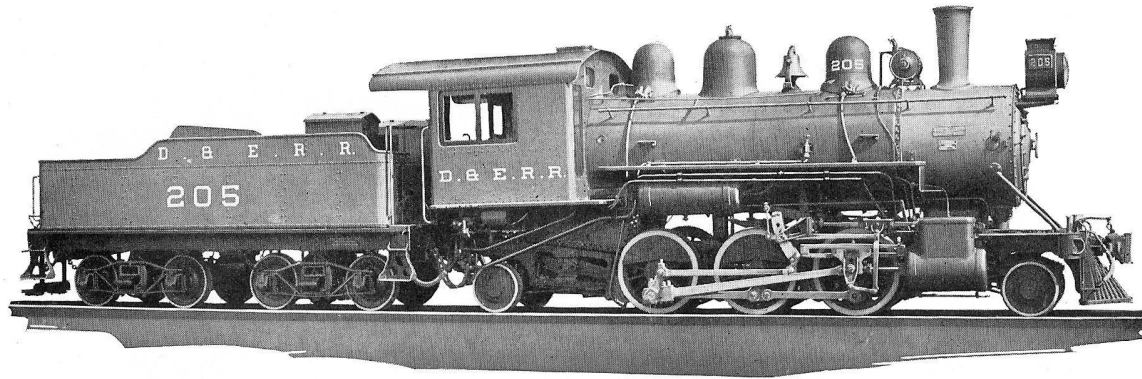
AMERICAN LOCOMOTIVE COMPANY



SIX-COUPLED DOUBLE END TANK LOCOMOTIVES 2-6-2-T TYPE
SIDE TANK

CODE WORD	Minimum Track Gage ft.-ins.	Cylinder Diameter and Stroke inches	Driving Wheel Diam. inches	Boiler Pressure lb. per sq. in.	Tractive Power pounds	WEIGHT IN WORKING ORDER		WHEEL BASE		Minim. Weight of Rail pounds	Minim. Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers pounds	Engine pounds	Driving ft.-ins.	Engine ft.-ins.				On Level	On Grades of				
														½%	1%	1½%	2%	3%
UCWIN	4-8½	16x24	44	180	21400	86000	109000	10-2	24-1	50	150	1300	2030	1195	725	510	390	255
UCWOB	4-8½	17x24	44	180	24100	104000	135000	10-6	24-10	55	150	1400	2275	1340	805	565	430	280
UCWUR	4-8½	18x24	46	180	25800	110000	140000	10-6	24-10	60	175	2000	2440	1435	870	610	465	300
UCXEX	4-8½	19x24	46	180	28800	120000	155000	10-0	25-0	65	175	2500	2730	1620	980	690	530	345

AMERICAN LOCOMOTIVE COMPANY



PRAIRIE LOCOMOTIVES FOR LOGGING SERVICE 2-6-2 TYPE

CODE WORD	Minim. Track Gage ft.-ins.	Cylinder Diam. and Stroke inches	Driving Wheel Diam. inches	Boiler Press. lb. per sq. in.	Tractive Power pounds	WEIGHT IN WORKING ORDER		WHEEL BASE			Minim. Weight of Rail pounds	Minim. Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers pounds	Engine pounds	Driving ft.-ins.	Engine ft.-ins.	Eng. and Ten. ft.-ins.				On Level	On Grades of				
															½%	1%	1½%	2%	3%
UCYAG	4-8½	16x24	44	180	21400	85000	112000	9-0	24-3	47-0	50	150	3500	1980	1150	680	470	350	215
UCYDA	4-8½	17x22	44	180	22100	90000	122000	9-6	25-9	47-6	50	150	4000	2050	1180	710	480	350	215
UCYKL	4-8½	18x24	50	180	23800	94000	122000	10-0	26-4	48-6½	55	165	4000	2200	1280	750	520	385	240
UCYOD	4-8½	19x26	48	180	30000	120000	150000	9-9	25-5	50-0	65	165	5000	2790	1625	970	665	490	305
UCYRZ	4-8½	20x26	50	200	35400	147000	195000	11-0	27-6	56-0	75	180	6000	3280	1905	1120	770	570	350

AMERICAN LOCOMOTIVE COMPANY

CONSOLIDATION LOCOMOTIVES

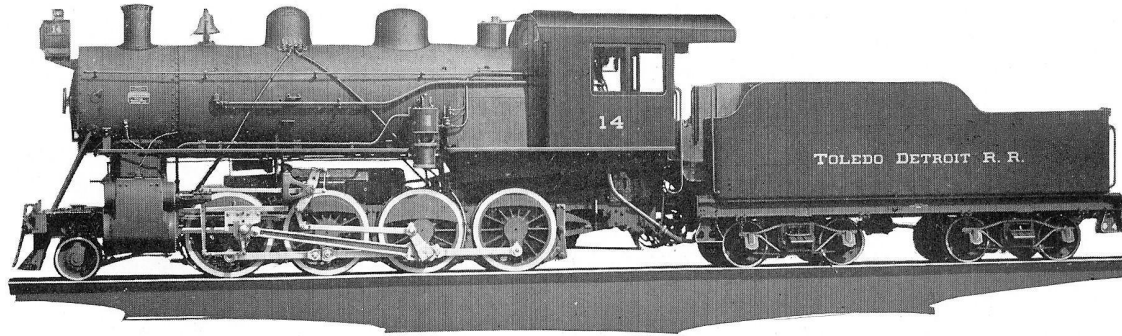
2-8-0 TYPE

The consolidation locomotive has for many years held a leading place in the freight service of American railroads. It is also used for narrow gage roads, plantations, and for similar service conditions where the weight on drivers, necessary with the required hauling capacity, cannot be carried by a less number of wheels without injuring the rails. Locomotives, both larger and smaller than the sizes listed, will be furnished for conditions requiring them.

The leading center bearing truck, with swing bolster, is equalized with the first and second pairs of drivers. The third and fourth pairs of drivers are equalized together.

Back end arrangements vary with the size of locomotives and operating conditions. The smaller sizes, under 21 " cylinders, have usually fireboxes on top of frames and between rear driving wheels. Engines with 21 " cylinders and over have preferably wide fireboxes, with large grate area, over the rear drivers.

AMERICAN LOCOMOTIVE COMPANY



CONSOLIDATION LOCOMOTIVES 2-8-0 TYPE

CODE WORD	Minim. Track Gage	Cylinder Diam. and Stroke	Driving Wheel Diam.	Boiler Press.	Tractive Power	WEIGHT IN WORKING ORDER		WHEEL BASE			Minim. Weight of Rail	Minim. Radius of Curve	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers pounds	Engine pounds	Driving ft.-ins.	Engine ft.-ins.	Eng. and Ten. ft.-ins.				On Level	On Grades of				
	ft.-ins.	inches	inches	lb. per sq. in.	pounds						pounds	pounds	ft.-ins.		ft.-ins.	ft.-ins.	pounds	feet	cu. ins.
UCYUT	4-8½	18x24	50	180	23800	109000	125000	13-6	21-0	50-0	50	200	4000	2210	1280	760	520	390	240
UCYVR	4-8½	19x26	50	180	28700	119000	133000	14-0	22-0	50-8	55	200	5000	2675	1560	925	635	475	295
UCZAH	4-8½	20x26	50	180	31800	135000	150000	15-0	23-4	52-7	55	225	5000	2960	1730	1030	710	530	330
UCZEZ	4-8½	21x28	56	180	33800	145000	162000	15-6	23-5	56-0	60	225	6000	3140	1830	1080	750	555	345
UCZIX	4-8½	22x28	56	180	37000	170000	195000	15-6	24-10	60-0	70	250	6000	3430	1990	1180	810	600	370

AMERICAN LOCOMOTIVE COMPANY

MIKADO LOCOMOTIVES

2-8-2 TYPE

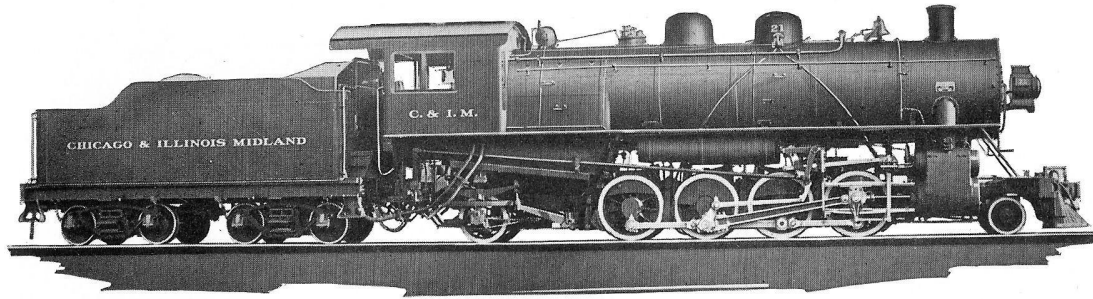
The Mikado is a development of the Consolidation having a wide, deep firebox back of rear drivers and over trailing truck wheels, thus providing space for an efficient boiler with large grate area, long tubes, and approved smoke box arrangement.

The leading center bearing truck is equalized with first and second drivers; third and fourth drivers are equalized with the side bearing trailing truck, thus each wheel is independently adjusted to track variation. Leading and trailing trucks guide engine around curves, improve the riding qualities, and minimize flange wear.

The combination of these and other excellent features in one design has produced in the Mikado a superior locomotive for heavy and fast freight service, well adapted for work on long grades, many curves, or level track.

Having radial leading and trailing trucks and a flexible spring arrangement, these locomotives are adapted for logging roads, plantations, or double end service, where the length of roads and weight of trains require engines of large hauling capacity.

AMERICAN LOCOMOTIVE COMPANY



MIKADO LOCOMOTIVES 2-8-2 TYPE

CODE WORD	Minim. Track Gage ft.-ins.	Cylinder Diam. and Stroke inches	Driving Wheel Diam. inches	Boiler Press. lb. per sq. in.	Tractive Power pounds	WEIGHT IN WORKING ORDER		WHEEL BASE			Minim. Weight of Rail pounds	Minim. Radius of Curve feet	Tank Capacity in Gals. of 231 cu. ins.	HAULING CAPACITY IN TONS OF 2000 POUNDS					
						Drivers pounds	Engine pounds	Driving ft.-ins.	Engine ft.-ins.	Eng. and Ten. ft.-ins.				On Level	On Grades of				
															½%	1%	1½%	2%	3%
UCZOE	4-8½	20x28	50	180	34300	130000	175000	14-3	30-6	58-0	55	200	5000	3200	1860	1110	765	570	355
UCZYL	4-8½	21x28	50	180	37800	150000	195000	13-6	29-6	60-0	60	200	6000	3520	2050	1215	835	620	385
UCACE	4-8½	22x28	50	180	41500	170000	218000	14-3	32-10	61-0	70	200	6000	3870	2250	1330	920	685	425
UCAFY	4-8½	23x28	54	195	45500	180000	230000	14-6	33-2	64-0	70	200	7000	4245	2470	1465	1010	755	470

AMERICAN LOCOMOTIVE COMPANY

LOCOMOTIVE REQUIREMENTS

When ordering locomotives the following data should be supplied with order by cable or letter:

GENERAL

Name of Road.
Number of Locomotives desired.
Type of Locomotive.
Wheel Arrangement.
Class of Service.
Fuel—Kind and Grade.
Boiler Pressure.
Tender Type.
Water Capacity, gallons.
Fuel Capacity.

HAULING CAPACITY

State tonnage to be hauled (cars and load) on ruling grade, giving grade and speed.

Give capacity of car and state if maximum tonnage on grades is made up of loaded or light cars.

Maximum speed in miles per hour.

Is engine to be operated backing in road service?

Give profile of road or describe steepest grade giving length, per cent or rise in feet, the length and degree or radius of sharpest curve on steepest grade, and state at what speed grade may be approached to use momentum of train to assist in ascending grade.

Are curves compensated on grades?

State whether loads are to operate with or against grades.

Give degree or radius and length of sharpest curve where engines operate continuously.

Describe sharpest curve engines are required to pass.

AMERICAN LOCOMOTIVE COMPANY

TRACK DATA AND WEIGHT LIMITATIONS

Track Gage.
Track Centers.
Spread of rails on maximum curve.
Elevation of outer rail on maximum curve.
Weight of rail per yard.
Tie spacing.
Limit of weight per axle.
Limit of weight per foot of driving wheel base.

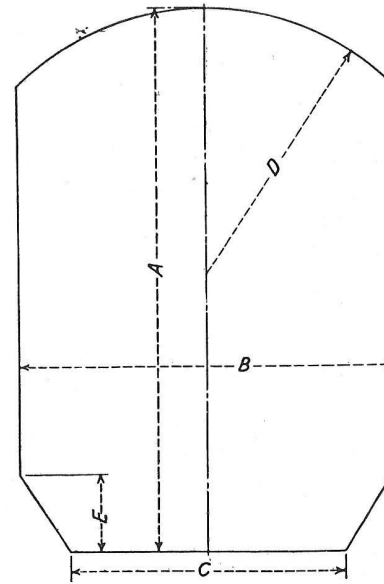
CLEARANCE LIMITATIONS

Limit of height.
Limit of width.
Tender, height above rail to top of tank filling hole.
Tender, height above rail for coaling.
Limit of total wheel base of engine and tender.
Limit of total length of engine and tender.
Fill in blank dimensions on clearance diagram, giving in each case maximum figures.

COUPLERS

Style (use code word—page 40).
Height above rail to center.

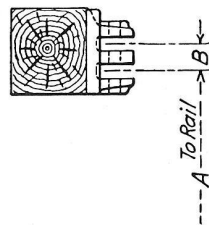
CLEARANCE DIAGRAM



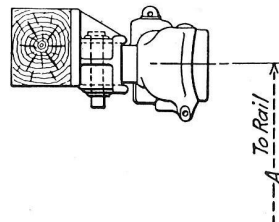
State whether diagram figures given are maximum for rolling stock or minimum dimensions for right of way.

AMERICAN LOCOMOTIVE COMPANY

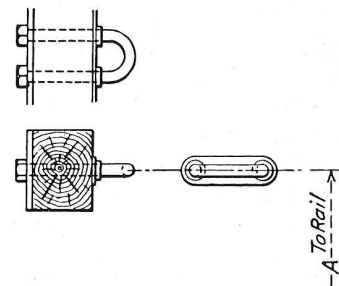
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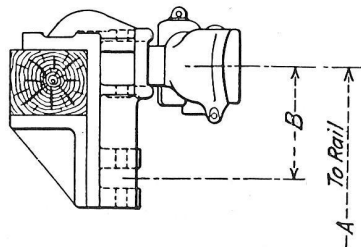
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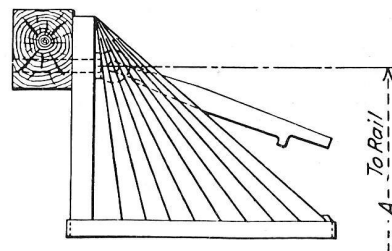
Code Word-EGDUY



Code Word-EGDEV



Code Word-EGDOX



AMERICAN LOCOMOTIVE COMPANY

TRACTIVE POWER

The tractive power of the different classes of locomotives given in this catalogue is based on a mean effective pressure in cylinders of 85 per cent of boiler pressure. It is the maximum tractive power of the locomotive. Tractive power becomes less when the piston speed exceeds 250 feet per minute or a corresponding train speed of about ten miles an hour for the larger locomotive sizes.

Tests have shown that the fastest speed at which very small locomotives will develop maximum tractive power is much less than for large locomotives, varying with the size of engine, the length of stroke, and the diameter of driving wheels.

Tractive power is calculated by the formula:

$$\text{T. P.} = \frac{d^2 \times L \times (0.85 \times B)}{D}$$

T. P. = tractive power.

d = diameter of cylinders, in inches.

L = length of stroke, in inches.

B = boiler pressure, in pounds per square inch.

D = diameter of driving wheels, in inches.

By this formula, a locomotive with cylinders 14 inches diameter, 22 inches stroke, 190 pounds boiler pressure and 40 inch driving wheels, would have a tractive power of:

$$\frac{14 \times 14 \times 22 \times (0.85 \times 190)}{40} = 17,400 \text{ pounds}$$

AMERICAN LOCOMOTIVE COMPANY

TRAIN RESISTANCE

Train resistance is usually expressed in pounds per ton (2000 lb.). It varies with the weight, type, mechanical condition and lubrication of cars, the condition of tracks, and temperature. Under most favorable condition train resistance falls as low as $2\frac{1}{2}$ lb. per ton, for 80 ton capacity loaded cars, from 7 to 8 for empty cars moving at uniform low speed on level track, and from 14 to 25 in starting, depending upon condition of cars and track, temperature, and length of stop. In starting either freight or passenger trains on level track the slack in draw gear and the action of draft springs permit starting each car separately. For trains on a grade, or for passenger trains where cars cannot be bunched, the whole train must be started at the same time and allowances made accordingly.

With good track conditions, resistance due to rolling friction is approximately $6\frac{1}{2}$ lb. per ton for cars of approved design. Logging cars of good construction vary from $6\frac{1}{2}$ to 12 lb. resistance. Contractor's dump cars are usually hard running, with resistance varying from 10 to 25 lb. Resistance increases rapidly under bad conditions of cars and track, varying from 20 to 40 lb. per ton and even more in extreme cases.

Resistance due to grade may be calculated accurately being 20 lb. per ton for each 1 per cent of grade. For uncompensated curves the resistance per degree of curvature is usually taken at .8 lb., or the equivalent of .04 per cent grade.

Locomotive resistance, including machine and rolling friction, is about 25 lb. per ton of weight on drivers and the same at all speeds. Leading, trailing, and tender truck resistance is approximately the same per ton as for the cars of the train.

AMERICAN LOCOMOTIVE COMPANY

HAULING CAPACITY

The hauling capacity of a locomotive on level track is found by deducting the total engine and tender resistance (in pounds) due to machine and rolling friction from the tractive power and dividing by the train resistance in pounds per ton. The result is the number of tons the locomotive will haul.

For grades with uncompensated curves, the resistance of locomotive due to grade and curve must be added to the resistance of locomotive on the level, then deducted from the tractive power and divided by the train resistance per ton on the level plus the resistance per ton due to grade and uncompensated curve. The result is the number of tons the locomotive will haul up the grade.

Tables of hauling capacity given in connection with the designs shown in this catalogue are based on a rolling frictional resistance of $6\frac{1}{2}$ pounds per ton of train including cars and lading, on straight level track. This is correct only when cars and tracks are in good condition.

AMERICAN LOCOMOTIVE COMPANY

CURVES

In the United States, railroad curves are usually expressed in degrees and minutes of central angle subtended by a chord of 100 ft.

One degree of curvature is equal to radius of 5730 ft., since $5730 \times 2 \times 3.1416 = 360 \times 100$. Usually, the slight error produced by measuring the distance as a straight line instead of an arc may be ignored, except in very sharp curves.

To obtain approximately the radius of a curve in feet, divide 5730 by the number of degrees.

To obtain degrees, divide 5730 by the radius in feet.

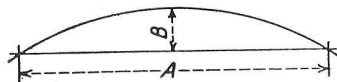
The slight inaccuracies by this method increase with the sharpness of the curve. Thus, at 10° the actual radius is 0.7 ft. longer; at 20° , 1.4 ft. longer; at 30° , 2.2 ft. longer and at 40° , 2.95 ft. longer than by the formula.

In the metric system, the radius is less per degree because the chord is 20 meters (65.62 ft.); therefore, in converting to English measurements multiply by 0.6562.

In Great Britain the radius of a curve is generally taken in chains (66 ft.); therefore, a one degree curve equals 86.818 chains, or 5730 divided by 66. To obtain radius in chains, divide 86.818 by degrees; or to obtain degrees divide 86.818 by the radius in chains.

To find the radius of an existing curve, measure a chord of any suitable length in feet and its rise in feet or fractions thereof. The square of half the chord added to square of the rise, divided by twice the rise, will equal the radius in feet:

$$R = \frac{\left(\frac{A}{2}\right)^2 + B^2}{2B}$$



AMERICAN LOCOMOTIVE COMPANY

One of the most convenient methods of measuring an existing curve is to use a string of say 30 ft. in length, hold it on the inside of the outer rail at the lower edge of the head and measure at the center the middle ordinate or distance from string to rail head. To insure a fair degree of accuracy, several measurements should be taken at different places. For convenience the following table is given:

MIDDLE ORDINATE (IN FEET) OF CHORD 30 FT. IN LENGTH

Deg. of Curvature	Radius in Feet	MIDDLE ORDINATE		Deg. of Curvature	Radius in Feet	MIDDLE ORDINATE		Deg. of Curvature	Radius in Feet	MIDDLE ORDINATE	
		Feet	Inches			Feet	Inches			Feet	Inches
0.5	11460.0	.010	.12	10.0	573.7	.196	2.35	29.0	199.7	.564	6.77
1.0	5730.0	.020	.24	11.0	521.7	.216	2.59	30.0	193.2	.583	7.00
1.5	3820.0	.029	.35	12.0	478.3	.236	2.83	31.0	188.0	.610	7.32
2.0	2865.0	.038	.46	13.0	441.7	.254	3.05	32.0	182.0	.630	7.56
2.5	2292.0	.049	.59	14.0	410.3	.275	3.30	33.0	176.0	.650	7.80
3.0	1910.0	.058	.70	15.0	383.1	.295	3.54	34.0	171.0	.663	7.96
3.5	1637.0	.070	.84	16.0	359.3	.313	3.76	35.0	167.0	.680	8.16
4.0	1433.0	.079	.95	17.0	338.3	.333	4.00	36.0	162.0	.700	8.40
4.5	1274.0	.088	1.06	18.0	319.6	.351	4.21	37.0	158.0	.720	8.64
5.0	1146.0	.099	1.19	19.0	302.9	.371	4.45	38.0	154.0	.740	8.88
5.5	1042.0	.108	1.30	20.0	287.9	.392	4.70	39.0	150.0	.760	9.12
6.0	955.4	.117	1.40	21.0	274.4	.410	4.92	40.0	147.0	.780	9.36
6.5	882.0	.128	1.54	22.0	262.0	.430	5.16	41.0	143.0	.800	9.60
7.0	819.0	.137	1.64	23.0	250.8	.450	5.40	42.0	140.0	.818	9.82
7.5	764.5	.146	1.75	24.0	240.5	.469	5.63	43.0	137.0	.837	10.04
8.0	716.8	.158	1.90	25.0	231.0	.486	5.83	44.0	134.0	.860	10.32
8.5	674.7	.166	1.99	26.0	222.3	.506	6.07	45.0	131.0	.875	10.50
9.0	637.3	.175	2.10	27.0	214.2	.524	6.29
9.5	603.8	.187	2.24	28.0	206.7	.545	6.54

AMERICAN LOCOMOTIVE COMPANY

The resistance of curves is usually expressed in pounds per ton per degree of curvature, and is variously estimated by different authorities from 0.50 to 1.72 pounds. More generally, it is taken at 0.80 pounds, equivalent to a grade of 0.04 per cent, and this figure has been taken in these calculations.

CURVE RESISTANCE OF FREIGHT AND PASSENGER CARS

Curve resistance = 0.8 lb. per ton per degree.

Equivalent grade per degree of curvature = 2.11 feet per mile or 0.04 per cent grade.

Deg. of Curve	Radius of Curve in Ft.	Resistance, Pounds per Ton	EQUIVALENT GRADE		Deg. of Curve	Radius of Curve in Ft.	Resistance, Pounds per Ton	EQUIVALENT GRADE		Deg. of Curve	Radius of Curve in Ft.	Resistance, Pounds per Ton	EQUIVALENT GRADE	
			Per Cent	Feet per Mile				Per Cent	Feet per Mile				Per Cent	Feet per Mile
1	5730	0.80	.04	2.1	16	359	12.80	.64	33.8	31	188	24.80	1.24	65.4
2	2865	1.60	.08	4.2	17	338	13.60	.68	35.9	32	182	25.60	1.28	67.5
3	1910	2.40	.12	6.3	18	320	14.40	.72	38.0	33	176	26.40	1.32	69.6
4	1433	3.20	.16	8.4	19	303	15.20	.76	40.1	34	171	27.20	1.36	71.7
5	1146	4.00	.20	10.6	20	288	16.00	.80	42.2	35	167	28.00	1.40	73.8
6	955	4.80	.24	12.7	21	274	16.80	.84	44.3	36	162	28.80	1.44	76.0
7	819	5.60	.28	14.8	22	262	17.60	.88	46.4	37	158	29.60	1.48	78.1
8	717	6.40	.32	16.9	23	251	18.40	.92	48.6	38	154	30.40	1.52	80.2
9	637	7.20	.36	19.0	24	240	19.20	.96	50.7	39	150	31.20	1.56	82.3
10	574	8.00	.40	21.1	25	231	20.00	1.00	52.8	40	147	32.00	1.60	84.4
11	522	8.80	.44	23.2	26	222	20.80	1.04	54.9	41	143	32.80	1.64	86.5
12	478	9.60	.48	25.3	27	214	21.60	1.08	57.0	42	140	33.60	1.68	88.6
13	442	10.40	.52	27.5	28	207	22.40	1.12	59.1	43	137	34.40	1.72	90.7
14	410	11.20	.56	29.6	29	200	23.20	1.16	61.2	44	134	35.20	1.76	92.8
15	383	12.00	.60	31.7	30	194	24.00	1.20	63.3	45	131	36.00	1.80	95.0

AMERICAN LOCOMOTIVE COMPANY

COMPARISON OF DIFFERENT METHODS OF DESIGNATING THE SAME GRADE

Per Cent of Grade		Grade in Feet per Mile	Per Cent of Grade		Grade on Feet per Mile
$\frac{1}{8}$ of 1 per cent	or $1\frac{1}{2}$ inches per 100 feet	= 6.6 feet per mile	$4\frac{1}{2}$ per cent or 4 feet 6 inches per 100 feet	= 237.6 feet per mile	
$\frac{1}{4}$ of 1 per cent	or 3 inches per 100 feet	= 13.2 feet per mile	$4\frac{3}{4}$ per cent or 4 feet 9 inches per 100 feet	= 250.8 feet per mile	
$\frac{1}{2}$ of 1 per cent	or 6 inches per 100 feet	= 26.4 feet per mile	5 per cent or 5 feet 0 inches per 100 feet	= 264.0 feet per mile	
$\frac{3}{4}$ of 1 per cent	or 9 inches per 100 feet	= 39.6 feet per mile	$5\frac{1}{4}$ per cent or 5 feet 3 inches per 100 feet	= 277.2 feet per mile	
1 per cent or 1 foot 0 inches per 100 feet	= 52.8 feet per mile		$5\frac{1}{2}$ per cent or 5 feet 6 inches per 100 feet	= 290.4 feet per mile	
$1\frac{1}{4}$ per cent or 1 foot 3 inches per 100 feet	= 66.0 feet per mile		$5\frac{3}{4}$ per cent or 5 feet 9 inches per 100 feet	= 303.6 feet per mile	
$1\frac{1}{2}$ per cent or 1 foot 6 inches per 100 feet	= 79.2 feet per mile		6 per cent or 6 feet 0 inches per 100 feet	= 316.8 feet per mile	
$1\frac{3}{4}$ per cent or 1 foot 9 inches per 100 feet	= 92.4 feet per mile		$6\frac{1}{4}$ per cent or 6 feet 3 inches per 100 feet	= 330.0 feet per mile	
2 per cent or 2 feet 0 inches per 100 feet	= 105.6 feet per mile		$6\frac{1}{2}$ per cent or 6 feet 6 inches per 100 feet	= 343.2 feet per mile	
$2\frac{1}{4}$ per cent or 2 feet 3 inches per 100 feet	= 118.8 feet per mile		$6\frac{3}{4}$ per cent or 6 feet 9 inches per 100 feet	= 356.4 feet per mile	
$2\frac{1}{2}$ per cent or 2 feet 6 inches per 100 feet	= 132.0 feet per mile		7 per cent or 7 feet 0 inches per 100 feet	= 369.6 feet per mile	
$2\frac{3}{4}$ per cent or 2 feet 9 inches per 100 feet	= 145.2 feet per mile		$7\frac{1}{2}$ per cent or 7 feet 6 inches per 100 feet	= 396.0 feet per mile	
3 per cent or 3 feet 0 inches per 100 feet	= 158.4 feet per mile		8 per cent or 8 feet 0 inches per 100 feet	= 422.4 feet per mile	
$3\frac{1}{4}$ per cent or 3 feet 3 inches per 100 feet	= 171.6 feet per mile		$8\frac{1}{2}$ per cent or 8 feet 6 inches per 100 feet	= 448.8 feet per mile	
$3\frac{1}{2}$ per cent or 3 feet 6 inches per 100 feet	= 184.8 feet per mile		9 per cent or 9 feet 0 inches per 100 feet	= 475.2 feet per mile	
$3\frac{3}{4}$ per cent or 3 feet 9 inches per 100 feet	= 198.0 feet per mile		$9\frac{1}{2}$ per cent or 9 feet 6 inches per 100 feet	= 501.6 feet per mile	
4 per cent or 4 feet 0 inches per 100 feet	= 211.2 feet per mile		10 per cent or 10 feet 0 inches per 100 feet	= 528.0 feet per mile	
$4\frac{1}{4}$ per cent or 4 feet 3 inches per 100 feet	= 224.4 feet per mile				

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RAIL CARRYING CAPACITY

It may be assumed that light steel rails weighing less than 40 pounds per yard, with crossties properly spaced, will carry from 200 to 250 pounds on a wheel for each pound weight of rail. For heavy rails it is safe to use from 275 to 350 pounds on a wheel for each pound weight of rail.

Under these conditions a four-wheel locomotive weighing 32,000 pounds on driving wheels, 8000 pounds on each wheel, would require a rail weighing 32 pounds per yard. The same weight of rail would carry a locomotive, weighing 48,000 lb., having 3 pairs (6) driving wheels. Assuming that the six-wheel locomotive weighed the same as the four-wheel locomotive, 32,000 pounds, a rail 21 pounds per yard would be sufficiently strong.

It is desirable that the rail should exceed the minimum calculated weight thereby reducing the deflection of rail under load and increasing the stability of the track and the hauling capacity of the locomotive.

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FUEL

The fuel burned on locomotives operating in America varies with the location of the road, the class of service and the cost of fuel delivered at the point where used.

Named in order of their importance are:

1. Bituminous Coal
2. Fuel Oil
3. Anthracite Coal
4. Wood
5. Coke

A large proportion of American locomotives are arranged for bituminous coal. This fuel burns with a long flame and requires rather a deep firebox with ample space for the combustion of gases. The inferior grades of bituminous coal including western lignites require special features in firebox and smoke box arrangement for proper combustion and to prevent throwing sparks.

FUEL OIL, WOOD, AND COKE burn successfully in fireboxes originally designed for bituminous coal, requiring few changes other than suitable grates, ash pan, and draft appliances.

Fuel oil is used in locations near oil fields; to reduce danger of forest fires from sparks; and for special conditions when the cost is not prohibitive.

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Other advantages of fuel oil are:

1. Fire is under perfect control under all conditions.
2. Lessened fire risk.
3. Ability to maintain full boiler pressure for long periods and to force boiler beyond its limitations with other fuels.
4. Absence of manual labor by fireman.
5. Absence of spark and smoke nuisance with corresponding fuel losses.
6. Greater number of heat units to a given weight of fuel.
7. Greater cleanliness of equipment and storage plants.

For all systems of oil burning equipment the lower portion of firebox is lined with fire bricks, and no grates are used. Oil vaporized by steam pressure is sprayed into the firebox and burns with intense heat.

Wood fuel is seldom used excepting on logging roads where large quantities of refuse wood are available.

Deep fireboxes are desirable for wood burning locomotives, also diamond shaped smoke stacks fitted with netting and other spark retaining devices.

Coke is sometimes used as locomotive fuel where a supply is readily available or where smokeless combustion is essential. Practically no change is necessary in stack, smoke box, or grates of engines burning soft coal.

Both wood and coke, having an open porous structure, absorb large quantities of water unless protected from the weather. Neither should be used as fuel except when dry.

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Anthracite coal burns relatively slowly and with a short flame. A thin fire is carried and accordingly fireboxes need not be as deep as for bituminous coal, but a larger grate area is necessary,—anthracite lump requiring 25 to 30 per cent and slack 80 to 100 per cent increase for locomotives of the same size. To prevent fuel losses, special grate bars having small openings should be used for anthracite slack coal.

It is therefore obviously impractical to substitute anthracite on locomotives designed for bituminous coal without first applying new fireboxes and grates.

APPROXIMATE RELATIVE VALUES OF DIFFERENT FUELS BASED ON THE HEAT UNIT CONTENTS OF EACH

	Bituminous Coal	Anthracite Coal	Coke	Hard Wood	Soft Wood	Fuel Oil
Equivalent Fuel Based on Heat Units	1 Ton	1 Ton	1 Ton	1¼–1½ Cords	2–2½ Cords	150–168 Gals.
Weight—Pounds	2000	2000	2000	5000	5000	1095–1225
Bulk—Cubic Feet	47.4	39.7	71.4	160–192	256–320	20–22.4
Weight Per Cubic Foot in Pounds	47.3	56.4	28	31.2–26	19.5–15.6	54.6

COMMERCIAL COAL SIZES

ANTHRACITE

Name	SIZE	
	Through Screen with Mesh inches	Over Screen with Mesh inches
Broken	...	2¾
Egg	2¾	2
Stove	2	1¼
Chestnut	1¼	¾
Pea	¾	½
Buckwheat No. 1	½	¼
Buckwheat No. 2	¼	⅛

BITUMINOUS

Name	SIZE	
	Through Bars Spaced Apart inches	Over Bars Spaced Apart inches
Lump	...	1¼
Nut	1¼	¾
Slack	¾	...

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CLASSIFICATION OF LOCOMOTIVES

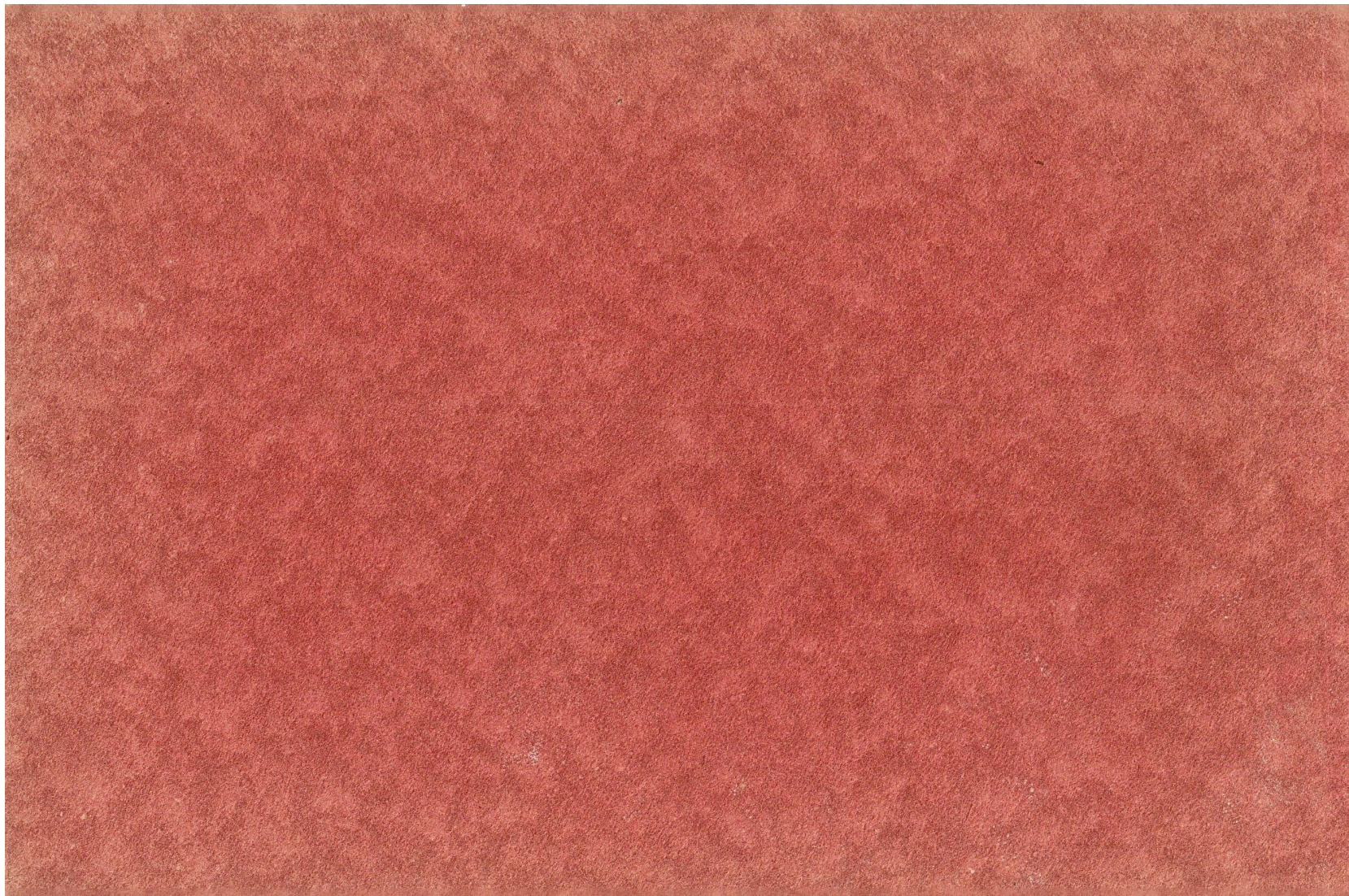
WHYTE'S SYSTEM

040		4 WHEEL SWITCHER
060		6 WHEEL SWITCHER
080		8 WHEEL SWITCHER
0100		10 WHEEL SWITCHER
0440		ARTICULATED
0660		ARTICULATED
0662		ARTICULATED
0880		ARTICULATED
010100		ARTICULATED
2440		ARTICULATED
2660		ARTICULATED
2880		ARTICULATED
2442		ARTICULATED
2662		ARTICULATED
2882		ARTICULATED
210102		ARTICULATED
240		4 COUPLED
260		MOGUL
280		CONSOLIDATION
2100		DECAPOD
440		8 WHEEL
460		10 WHEEL
480		12 WHEEL

042		4 COUPLED AND TRAILING
062		6 COUPLED AND TRAILING
082		8 COUPLED AND TRAILING
044		FORNEY 4 COUPLED
064		FORNEY 6 COUPLED
046		FORNEY 4 COUPLED
066		FORNEY 6 COUPLED
242		COLUMBIA
262		PRAIRIE
282		MIKADO
2102		SANTA FE
244		4 COUPLED
264		6 COUPLED
284		8 COUPLED
246		4 COUPLED
266		6 COUPLED
442		ATLANTIC
462		PACIFIC
482		MOUNTAIN
444		4 COUPLED DOUBLE ENDER
464		6 COUPLED DOUBLE ENDER
446		4 COUPLED DOUBLE ENDER
286		8 COUPLED DOUBLE ENDER

The locomotive classification adopted by the American Locomotive Company is based on the representation by numerals of the number and arrangement of the wheels, commencing at the front. Thus 260 means a Mogul and 460 a Ten-Wheel engine, the cypher denoting that no trailing truck is used.

Total weight is expressed in 1000 of pounds. Thus an Atlantic locomotive weighing 176,000 lb. would be classified as a 442-176 type. If the engine is Compound the letter C should be substituted for the dash, thus 442 C 176. If equipped with Superheater, the letter S should be used—thus a Mallet locomotive having six pairs of drivers, with Superheater, would be classified: 0660 C S 334 if Compound or 0660 S 334 if Simple. When tanks are used in place of separate Tender the letter T should be used in place of the dash. Thus a double end suburban locomotive with two wheeled leading truck, six drivers, and six wheeled rear truck, weighing 214,000 lb. would be a 266 T 214 type.



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NEW YORK CITY